

Joner (Jos. M.)

ANNUAL ORATION

BEFORE THE

Medical and Chirurgical Faculty of Maryland

APRIL 14, 1875.

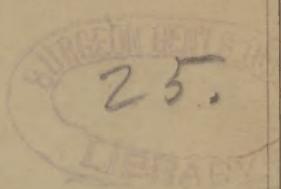
CONTRIBUTION TO THE

Medical History and Physical Geography

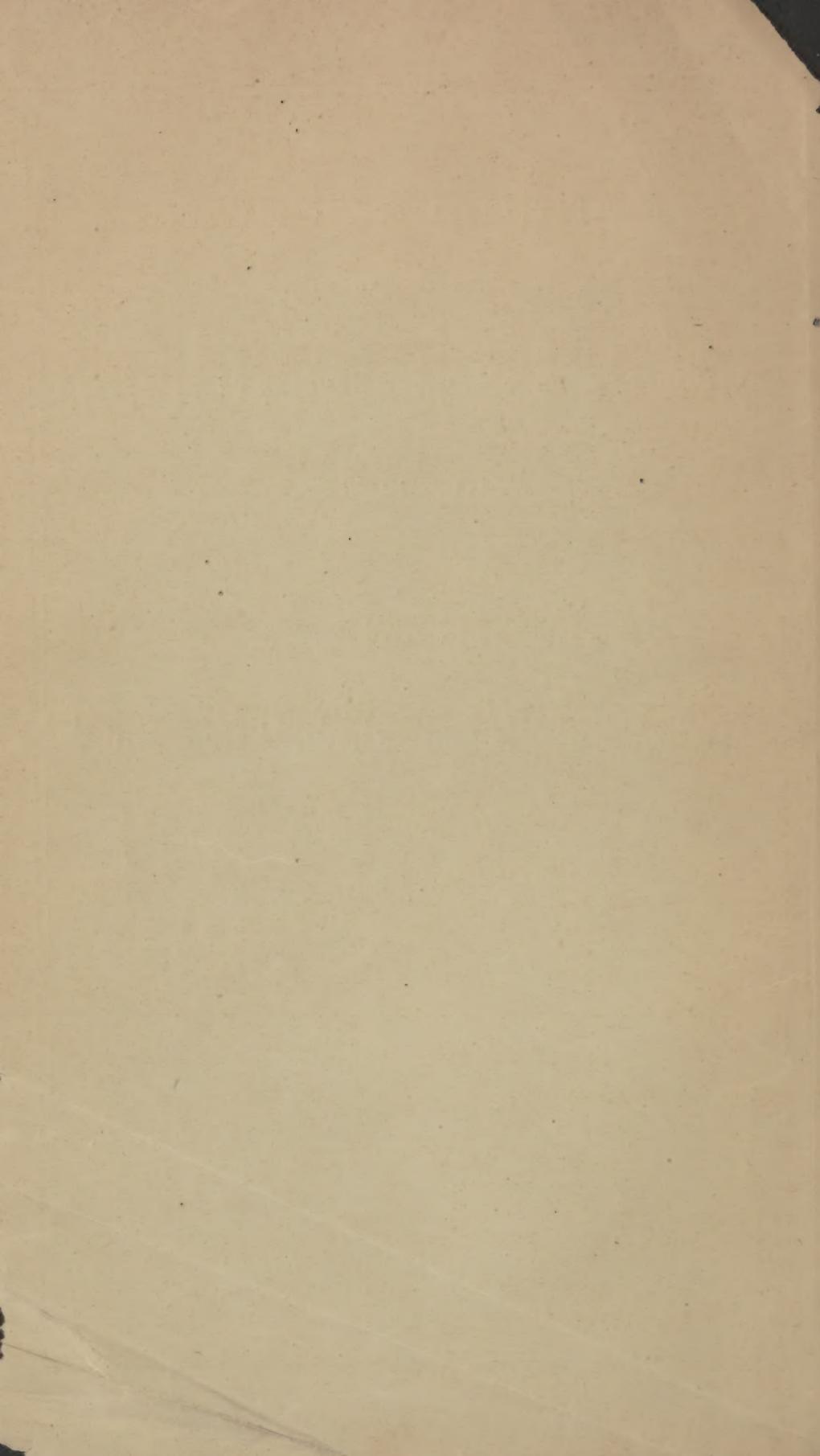
OF MARYLAND.

BY JOSEPH M. TONER, M. D.

Reprinted from the Transactions of the Medical and Chirurgical Faculty of
Maryland, 1875.



BALTIMORE:
INNES & COMPANY, PRINTERS AND BINDERS.
1875.



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ANNUAL ORATION.

*Mr. President and Gentlemen of the
Medical and Chirurgical Faculty of Maryland:*

My appearance before you to-day by your own solicitation, is a compliment which I highly appreciate, as it is an honor that should satisfy the ambition of any physician. The want of time, however, and the pressing duties of a general and somewhat exacting practice, warned me to decline the invitation. It might have been wiser to heed the warning; but the friendly feelings I entertain for the profession of Maryland, and for my many friends who are members of this association, rather than my judgment, induced me to attempt the task. The speaker who hopes to interest or instruct a society, must at least be acquainted with the scope and requirements, as well as the responsibilities, of the organisation he addresses. Without any of the qualities of an orator, it is, I fear, the extreme of temerity in me, to attempt to interest an audience in a city where oratory seems to be an inborn gift. I must therefore crave your brotherly forbearance with my shortcomings; and shall endeavor to confine my remarks as closely as possible to facts and suggestions, that I trust may to some extent interest the medical profession of Maryland.

From the earliest settlement of Maryland, the members of the medical profession within her borders have not only enjoyed, but deserved, the reputation of being highly educated and accomplished physicians and surgeons, as well as influential and patriotic citizens. In glancing over the names of those who have occupied prominent positions, and have taken leading parts in measures for the advancement of the public good and state policy, whether in its social, civil or political departments, it is

apparent that the members of the medical profession of Maryland, in the past century, and up to the present time, have held most honorable positions on the pages of her history. But throughout the United States, of late years, there has been a notable absence of physicians in legislative bodies, and it seems to be the fact that the profession has not been exercising its former influence in public affairs. With rare exceptions, the physician no longer accepts public office. Considering the good of the public, I am persuaded this change is unfortunate, as no other class of men, from its education and sympathies, other things being equal, is so well qualified to judge of the necessity, propriety, scope and efficiency of many subjects of legislation. I consider the calling of the physician, when intelligently pursued, to be the most necessary and useful of professions, the most catholic in its practice and purposes, and the most essential to the necessities, the preservation and the higher development of the race. It is a recognised fact that professional studies give to an enlightened mind a balance, encourage the exercise of individual endowments and energies, and awaken the best sympathies and highest aspirations of which man is capable. But devotion and enthusiasm are essential elements to the highest success of medical men. I know of no other school so well calculated for the development of these qualities as professional experience. The faculty of rapid and exact observation, and the creating of self-reliance, with an ability to seize upon the important, by eliminating the seeming from the essential, elements of a case, are nowhere so well learned as by the busy and responsible life of a country practitioner. The marvellous development which the different senses of the physician acquire by study and cultivation, would surprise one not accustomed to reflect upon the subject. The eye, the ear, touch, taste and smell, all attain a degree of acuteness and precision of which the non-professional has no conception. In a State medical association, composed as it is of the leading and thoughtful physicians from the cities and rural districts, we find many country practitioners possessing in a high degree the elements that entitle them to the front rank, not only as medical men, but as leaders of public thought and moulders of legislation.

As confirmatory of these views, and to preserve a record of the

honorable positions the medical men of Maryland took in public matters before and during the American Revolution, and as possessing particular significance with our approaching Centennial, I append as a note a list of the names of nearly one hundred physicians of the State of Maryland, with a brief reference to the public positions they held.* No doubt there are many others en-

*AHL (JOHN PETER), of Baltimore County, was placed upon the pension-roll May 1, 1821, for services as Surgeon's Mate in the Maryland Line. He died July 13, 1827, aged 85 years.—“*Pension Roll*,” Vol. XIII, p. 29.

ALLEN (MOSES) was a member of the Talbot County Committee of Observation, in March, 1775.—*American Archives*, 4th series, Vol. II, p. 175.

ANDREWS (THOMAS) was directed by the Maryland Council of Safety, July 10, 1776, to test a number of guns made for the Continental forces.—*American Archives*, 5th series, Vol. I, p. 154.

ANNIN (WILLIAM) was commissioned by the Maryland Council of Safety, August 28, 1776, Assistant Surgeon of Col. Hall's Battalion.—*American Archives*, 5th series, Vol. I, p. 1361.

ARCHER (JOHN) was elected a member of the Harford County Committee of Correspondence, at a meeting of the inhabitants, held June 11, 1774. He was subsequently, January 6, 1776, appointed Second Major of Col. Hall's Battalion by the Maryland Convention, and on October 1, 1776, was allowed £100 by the Council of Safety, to disburse on its behalf.—*American Archives*, 4th series, Vol. I, p. 403; Vol. IV, p. 737; 5th series, Vol. II, p. 637.

BAKER (WILLIAM) was elected a member of the Committee of Correspondence, and of a committee to attend the meeting of the General Committee at Annapolis, at a meeting of the inhabitants of the lower part of Frederick Co., June 11, 1774.—*American Archives*, 4th series, Vol. I, p. 403.

BEANES (WILLIAM) was elected a member of the committee to carry into execution in Prince George's County the Association of the American Continental Congress, at a meeting of the inhabitants, held at Upper Marlborough, in December, 1774.—*American Archives*, 4th series, Vol. I, p. 1012.

BEARD (WILLIAM) was requested, among other physicians of Baltimore, by the Baltimore County Committee, May 23, 1776, to refrain from inoculating with the small-pox, in order to prevent the appearance of the disease among the troops.—*American Archives*, 4th series, Vol. VI, p. 1459.

BISHOP (SMITH) was allowed, August 15, 1776, by the Maryland Council of Safety, £71 for medical attendance on Capt. Watkins' Company of regular troops.—*American Archives*, 5th series, Vol. I, p. 1358.

BOURKE or BOURK (THOMAS) was commissioned Feb. 10, 1776, by the Maryland Council of Safety, Capt. of the “Cambridge Blues,” of the Dorchester County militia. He was afterwards commissioned by the Maryland Council of Safety, August 2, 1776, Capt. of a company of militia for Flying Camp.—*American Archives*, 4th series, Vol. V, p. 1533; 5th series, Vol. I, pp. 430, 974, 1024, 1343, 1351.

BOYD (BENJAMIN), aged 74 years, was placed upon the pension-roll, February 13, 1819, for services as Surgeon's Mate in the Maryland Line.—“*Pension Roll*,” Vol. XIII, p. 39.

BOYD (JOHN) was requested, with other physicians of Baltimore, by the Baltimore County Committee, May 28, 1776, to refrain from inoculating with small-pox, to prevent the appearance of the disease among the troops. He was a member of the Baltimore County Committee of Observation in January, 1775, and was elected clerk of the Committee. November 30, 1774, he was elected a member of the Baltimore County Committee of Correspondence, and also a delegate to the Maryland Convention. He received various minor appointments and commissions from the Council of Safety.—*American Archives*, 4th series, Vol. I, p. 1146; Vol. II, p. 1653; Vol. III, pp. 125, 1253, 1949; Vol. IV, pp. 1691, 1692, 1701, 1708, 1713, 1722, 1726; Vol. V, pp. 186, 930, 984, 1571; Vol. VI, p. 1459; 5th series, Vol. II, pp. 117, 638.

titled to mention that could be added by a more careful study. It is largely to this class of intelligent and self-sacrificing phy-

BRISCOE (JOHN HANSON) was commissioned, August 27, 1776, by the Maryland Council of Safety, surgeon of the Independent Companies, and was allowed £20 for the purchase of surgical instruments.—*American Archives, 4th series, Vol. II, p. 631; 5th series, Vol. I, p. 1360.*

BROOKE (RICHARD) was elected a member of the Prince George's County Committee, and a delegate to the Maryland Convention, at a meeting of the inhabitants, held at Upper Marlborough, in December, 1774. He was re-elected a delegate to the Maryland Convention, January 16, 1775.—*American Archives, 4th series, Vol. I, pp. 1012, 1142.*

BROWN (JAMES) was surgeon of Capt. James Kent's company of Minute Men, that marched from Queen Anne's County, February 3, 1776.—*American Archives, 4th series, Vol. IV, p. 1533.*

BROWNE (DR. ——) had charge of a Maryland soldier, suffering from smallpox, at Port Tobacco, July 26, 1776.—*American Archives, 5th series, Vol. I, p. 592.*

BUDD (GEORGE) was appointed March 1, 1776, by the Maryland Council of Safety, surgeon of the ship "Defence."—*American Archives, 4th series, Vol. V, p. 1540.*

CALVERT (JONATHAN) was surgeon's mate of Col. Harrison's Maryland and Virginia regiment of artillery, from November 30, 1776, to April 1782.—*Saffell's "Records of the Revolutionary War," p. 241.*

CHRYSTIE (THOMAS) was surgeon of Col. Charles Harrison's Maryland and Virginia regiment of artillery, from April 1, 1778, to April 1782.—*Saffell's "Records of the Revolutionary War," p. 241.*

CLAYTON (JOSHUA), of Cecil County, was commissioned by the Maryland Convention, January 6, 1776, 2d Major of Col. John Veazy, Jr.'s, battalion ("Bohemia.")—*American Archives, 4th series, Vol. IV, p. 737.*

COALE (SAMUEL) was loaned by the Maryland Council of Safety, October 21, 1775, £250, to enable him to carry on the manufacture of saltpetre.—*American Archives, 4th series, Vol. III, p. 1117.*

CRAIG (DR. ——) was requested, June 29, 1776, by the Maryland Council of Safety, to take charge of some militia suffering from small-pox.—*American Archives, 4th series, Vol. VI, p. 1131.*

DASHIELL (WILLIAM) was allowed £22 10s. by the Maryland Council of Safety, May 13, 1776, for three months' pay as surgeon's mate in the Maryland Line.—*American Archives, 4th series, Vol. V, p. 1571.*

DENWOOD (LEVIN) was surgeon of the 3d Maryland regiment in June, 1781.—*Saffell's "Records of the Revolutionary War," p. 236.*

DIGGES (JOSEPH) was elected a member of the Prince George's County Committee of Safety, at a meeting of the inhabitants, held at Upper Marlborough, January 16, 1775.—*American Archives, 4th series, Vol. I, p. 1142.*

DONNING (RICHARD) was commissioned assistant surgeon of Col. Griffith's battalion of Flying Camp, by the Maryland Council of Safety, September 6, 1776.—*American Archives, 5th series, Vol. II, p. 628.*

DORSEY (JOHN), of Frederick County, was recommended to the Maryland Council of Safety, in August, 1776, as a suitable person for a surgeoncy in the Maryland Line. In October, 1776, his name appears on the roster as surgeon of Col. Ewing's regiment of Maryland troops, to which position he had been appointed by the Maryland Convention, August 20, 1776.—*American Archives, 5th series, Vol. I, p. 1091; Vol. II, p. 903; Vol. III, p. 92.*

DORSEY (NATHAN) was commissioned, March 1st, 1776, by the Maryland Council of Safety, Surgeon's Mate of the ship "Defence."—*American Archives.*

EDMONSTON (SAMUEL), of Maryland, was a hospital surgeon in the Continental army.—*Brown's "Medical Department of U. S. A.,*" p. 264.

ELBERT (JOHN L.) was a surgeon in the Maryland Line during the Revolution.

FINLEY (DOCTOR) was recommended to the Maryland Council of Safety, in August, 1776, as a suitable person for a surgeoncy in the militia.—*American Archives, 5th series, Vol. I, p. 1091.*

FISHER (ADAM) was commissioned by the Frederick County Committee, in

sicians that the profession of the State is indebted for the conception and organisation of the Medical and Chirurgical Faculty of

December, 1775, to command a guard of men for the conveyance of prisoners from Frederick to Philadelphia, and was delegated to receive from Congress remuneration for the expense incurred by the escort. He, subsequently, received an appropriation of £600 from the Council to enable him to raise a company in the Middle District of Frederick County, and was commissioned several times to make disbursements on behalf of the Council.—*American Archives, 4th series, Vol. IV, p. 479; 5th series, Vol. II, pp. 629, 640, 643, 658.*

GERWOOD (WILLIAM) was commissioned, October 23, 1776, by the Maryland Council of Safety, assistant surgeon to Dr. Tootell.—*American Archives, 5th series, Vol. II, p. 655.*

GRANT (DANIEL) received £4 10s. from the Western Shore Treasurer, by order of the Council of Safety, February 3d, 1776, "for the use of his room."—*American Archives, 4th series, Vol. V, p. 1331.*

GRAY (JAMES) was elected a member of the Calvert County Committee of Observation, at a meeting of the inhabitants of the county held at the Court-House, September 12th, 1775.—*American Archives, 4th series, Vol. III, p. 694.*

HALL (JOSEPH) was commissioned surgeon of Col. Griffith's battalion of Flying Camp, by the Maryland Council of Safety, September 6th, 1776.—*American Archives, 5th series, Vol. II, pp. 628, 636.*

HALL (WILLIAM W.), of Baltimore County, Md., was placed upon the United States pension-roll, July 1, 1820, for services as Surgeon of United States Rifle Corps.—"Pension Roll," Vol. XIII, p. 7.

HALLEDAY (LEONARD) was elected a member of the Prince George's County Committee, at a meeting of the inhabitants of the county, held at Upper Marlborough, in December, 1774, and afterwards in September, 1775, was elected a member of the Committee of Observation.—*American Archives, 4th series, Vol. I, p. 1012; Vol. III, p. 688.*

HANIE, or HAME, (EZEKIEL) was a surgeon in the Maryland Line of the Continental Army.—*Brown's "Medical Department of U. S. A."* p. 265.

HAYNE (HEZEKIAH) was Surgeon's Mate of the First Maryland Regiment, in June, 1781.—*Saffell's Records of the Revolutionary War*, p. 235.

HINDMAN (JOHN) received an appropriation from the Maryland Council of Safety, June 6, 1776, for medical attendance on Capt. Hindman's company. He was afterwards appointed Surgeon of the Eastern Shore Battalion of Militia, of Flying Camp, August 17, 1776.—*American Archives, 4th series, Vol. VI, p. 1467; 5th series, Vol. I, p. 1362; Vol. III, p. 89.*

HOWARD (EPHRAIM) was present at a meeting of the Maryland Convention, held at Annapolis, July 26, 1775, as a delegate from Anne Arundel County. He was elected a member of the Anne Arundel County Committee of Observation, September 12, 1775, and was allowed £600 by the Council of Safety, October 21, 1775, to enable him to carry on the manufacture of saltpetre.—*American Archives, 4th series, Vol. III, pp. 99, 693, 1117.*

HOWARD (THOMAS HENRY) was commissioned July 9, 1776, by the Maryland Council of Safety, Surgeon's Mate of a battalion to be stationed at Annapolis and Baltimore.—*American Archives, 5th series, Vol. I, pp. 1332, 1360.*

IRELAND (JOHN) was appointed a member of the St. Mary's County General Committee, at a meeting of the county inhabitants held at Leonardtown.—*American Archives, 4th series, Vol. I, p. 1060.*

JENIFER (DANIEL) was appointed assistant to Dr. Briscoe, August 27, 1776, by the Maryland Council of Safety. He was subsequently commissioned Hospital Surgeon.—*American Archives, 5th series, Vol. I, p. 1360; Vol. II, p. 626; Brown's "Med. Dept. U. S. A."* p. 264.

JOHNSON (EDWARD) was elected Nov. 16, 1774, at a meeting of the inhabitants of Calvert County, a member of the Calvert County Committee to carry into execution the laws of the Continental Congress, and in September, 1775, he was elected a member of the Calvert County Committee of Observation. He was appointed supervisor of the manufacture of saltpetre for the county of Calvert, December 27, 1775. The Council of Safety delegated him, June 20,

Maryland. This Society was chartered in 1799, three-quarters of a century ago. One hundred and five physicians of prominence,

1776, to investigate a reported discovery of a salt bed on the banks of the Patuxent.—*American Archives, 4th series, Vol. I, p. 982; Vol. III, p. 694; Vol. IV, p. 725; Vol. VI, p. 985.*

JOHNSON (JOHN) was commissioned September 7, 1776, by the Maryland Council of Safety, Assistant Surgeon of Col. Griffith's Battalion, of Flying Camp. He was recommended to the Council for such an appointment in August, 1776. The recommendation stated that "he is at present in Frederick Town."—*American Archives, 5th series, Vol. I, page 1091; Vol. II, p. 628.*

KEENE (SAMUEL L.) was a surgeon's mate in the Maryland Line of the Continental army.

KELTY (WILLIAM) was surgeon of the 4th Md. regiment in June, 1781.—*Saffell's "Records of the Rev. War," p. 236.*

KENNEDY (PATRICK) was requested, with other physicians of Baltimore, by the Baltimore County Committee, May 28, 1776, to refrain from inoculating with the small-pox, in order to prevent the appearance of small-pox among the troops—*American Archives, 4th series, Vol. VI, p. 1459.*

LAJOURNADE (ALEXANDER) was surgeon's mate of Col. Charles Harrison's regiment of Virginia and Maryland troops, from March 15, 1778, to April, 1782.—*Saffell's "Records of the Rev. War," p. 241.*

LEMMON (ROBERT) received authority from the Baltimore County Committee, in 1775, to raise a company of militia in the North Hundred of Baltimore County.—*American Archives, 5th series, Vol. I, p. 1057; 4th series, Vol. VI, p. 1458.*

LYON (WILLIAM), of Soldier's Delight, was appointed a member of the Baltimore County Committee of Observation, May 15, 1775.—*American Archives, 4th series, Vol. IV, p. 1713.*

MANADIER (HENRY), of Anne Arundel County, aged 77 years, was placed upon the pension-roll, November 23, 1832, for services as surgeon's mate of the Maryland Line during the Revolution.—*"Pension Roll," Vol. XIII, p. 45.*

MARTIN (ENNALS) received from the State £475 10s. 9d. pay for services as surgeon's mate in the Maryland Line, from June 1, 1777, to February 16, 1780. He was placed upon the pension-roll, July 16, 1832. He was at that time 76 years of age, and resided in Talbot County.—*Saffell's "Records of the Rev. War," p. 233. "Pension Roll," Vol. XIII, p. 51.*

MURRAY (DR.) was the brother of Alexander Murray who made application for the command of the province schooner lying at Annapolis, to the Maryland Council of Safety, in November, 1776.—*American Archives, 5th series, Vol. III, p. 660.*

MURROW or MORROW (DAVID), of Charlestown, Md., was commissioned, August 28, 1776, by the Maryland Council of Safety, surgeon of Col. Hall's Battalion.—*American Archives, 5th series, Vol. I, pp. 627, 1361.*

NEALE (FRANCIS) was commissioned assistant surgeon of Col. Smallwood's battalion of regular troops, by the Maryland Council of Safety, October 8, 1776.—*American Archives, 5th series, Vol. II, p. 640.*

PARNHAM (JOHN), of Charles County, was appointed, at a meeting of the inhabitants of the county, held at Port Tobacco, January 2, 1775, to open subscriptions in the East Hundred of Trinity Parish, for the purpose of raising the sum of money required to be raised in the county, at the last meeting of the Provincial Council.—*American Archives, 4th series, Vol. I, p. 1082; Vol. II, pp. 632, 644.*

PERRY (JOHN) was commissioned, October 7, 1776, by the Maryland Council of Safety, surgeon of a battalion to be raised under a previous resolution of Council.—*American Archives, 5th series, Vol. II, p. 640.*

PINDELL (RICHARD) was surgeon of the 1st Maryland Battalion.—*Brown's "Medical Department of U. S. Army," p. 265; Saffell's "Records of the Revolutionary War," p. 235.*

PINE (JOHN) was a surgeon in the Maryland Line in 1776.—*American Archives, 5th series, Vol. III, pp. 836, 837.*

PORTER (ANDREW) was recommended to the Maryland Convention, Sep-

and actively engaged in practice at that period in the different cities and counties of the State, resolved upon its organisation.

tember 7, 1776, as a suitable person for a surgeoncy in the Maryland troops.—*American Archives, Vol. II, 5th series, p. 209.*

POTTER (ZABDAEL) was appointed, August 24, 1776, by the Maryland Council of Safety, assistant surgeon of Col. William Richardson's battalion of Flying Camp, to accept which appointment he resigned his commission as ensign of the same regiment.—*American Archives, 4th series, Vol. VI, p. 464; 5th series, Vol. I, p. 1358.*

POTTINGER (RICHARD) was elected a member of the Prince George County Committee, in December, 1774, at a meeting of the inhabitants of the county, held at Upper Marlborough. He was afterwards commissioned by the Council of Safety to raise a company of men for the Flying Camp.—*American Archives, Vol. I, 5th series, p. 1012; Vol. II, p. 104.*

REEDER (HENRY) was elected a member of St. Mary's County General Committee, and of the Committee of Correspondence for the same county, at a meeting of the inhabitants, held at Leonardtown, December 23, 1774. In August, 1776, he received £10 9s. 6d. from the Council of Safety for medical attention on Capt. Thomas's Company of Maryland troops.—*American Archives, Vol. I, 5th series, pp. 386, 1341.*

RINGGOLD (JACOB) of Kent Island, was intrusted, in June and July, 1776, by the Council of Safety with the distribution of powder to the militia.—*American Archives, 5th series, Vol. I, pp. 386, 1341.*

ROBINSON (Dr. —) was allowed, August 23, 1776, by the Maryland Council of Safety, £5 6s. 6d., for medical attendance on Captain Forrest's company.—*American Archives, 4th series, Vol. I, p. 1357.*

SCOTT (JOHN) was elected a member of the Kent County Committee of Correspondence, at a meeting of the county inhabitants, held at Chestertown, June 2, 1774. In December, 1775, he was appointed supervisor of saltpetre works in Kent County.—*American Archives, 4th series, Vol. IV, p. 723; 5th series, Vol. II, p. 379.*

SMITH (ALEXANDER) was a surgeon's mate in the Maryland infantry, and in August, 1778, he was commissioned surgeon of the Maryland part of the German battalion.—*Brown's "Medical Department U. S. A.," p. 265; Saffell's Records of Rev. War, p. 237.*

STENHOUSE (ALEXANDER), of Baltimore, was allowed £432 8s. 2d., in February, 1776, by the Maryland Council of Safety, for medicines purchased from him, for the use of the Provincial troops.—*American Archives, 4th series, Vol. V, p. 1539.*

STEVENSON (HENRY) was requested, with other physicians of Baltimore, by the Baltimore County Committee, in May, 1776, to refrain from inoculating, until otherwise ordered, so as to prevent the appearance of small-pox among the Provincial troops.—*American Archives, 4th series, Vol. VI, p. 1459.*

STEVENSON (JOHN), of Baltimore, was accused of illegally importing salt into the colonies from prohibited sources, and was, soon after, arraigned before the Baltimore County Committee, as an intercepted letter addressed to him showed that the writer was conniving at the evasion of the importation laws of the Province. He was again arraigned before the Committee, July 25, 1776, charged with making treasonable reflections upon the actions of Continental Congress.—*American Archives, 4th series, Vol. II, pp. 34, 123, 308, 718, 1531; Vol. IV, pp. 1698, 1699, 1705, 1706, 1719, 1720; Vol. V, p. 40; Vol. VI, pp. 933, 1462, 1464.*

STOCKETT (THOMAS NOBLE) was commissioned September 26, 1776, by the Maryland Council of Safety, second assistant-surgeon of Colonel William Richardson's battalion of Flying Camp.—*American Archives, 5th series, Vol. II, p. 636.*

TABBS (BARTON) was appointed, September 16, 1776, by the Council of Safety, assistant-surgeon of the seven Independent companies.—*American Archives, Vol. II, p. 631.*

TAYLOR (CHRISTOPHER), of Baltimore County, was placed on the pension roll, December 19th, 1828, for services as surgeon's mate in the Invalid Corps.—*"Pension Roll," Vol. 13, p. 53.*

TILLOTSON (THOMAS) was a hospital surgeon in the Maryland Line of the Continental Army.—*Brown's "Medical Department U. S. A.," p. 264.*

I present in the form of a note, simply to save time in the reading of this address, brief sketches of the lives of about one-third

TOOTELL (RICHARD) was elected a member of the Anne Arundel County Committee of Observation, and of the Committee of Correspondence, September 12, 1775. In July, 1776, he was appointed surgeon-major of the Maryland troops, and two days later was commissioned surgeon of a battalion to be stationed at Annapolis and Baltimore.—*American Archives*, 4th series, Vol. II, p. 1112; Vol. III, pp. 693, 694; 5th series, Vol. I, pp. 101, 433, 593, 942, 993, 1332, 1349; Vol. II, pp. 458, 632, 643, 655, 659.

TROOPE (CHARLES) was allowed £4 4s 6d, July 18th, 1776, by the Maryland Council of Safety.—*American Archives*, 5th series, Vol. I, p. 1338.

TROUP (JOHN) was a member of the Talbot County Committee of Observation, who met at Brascup's Tavern, in March, 1775.—*American Archives*, 4th series, Vol. II, p. 175.

WALLACE (JOHN) was present at the Maryland Convention which met at Annapolis, July 26, 1775, as a delegate from Queen Anne's County.—*American Archives*, 4th series, Vol. III, p. 100.

WALLACE (MICHAEL) was commissioned by the Maryland Council of Safety, March 7, 1776, assistant surgeon of a battalion of Maryland troops, and received numerous appropriations for medicines and services.—*American Archives*, 4th series, Vol. V, pp. 1542, 1543, 1558, 1568; Vol. VI, pp. 1470, 1484; 5th series, Vol. I, p. 1332; Vol. II, pp. 640, 647; Vol. III, p. 509.

WARFIELD (CHARLES ALEXANDER) was elected a member of the Anne Arundel County Committee of Observation at a meeting of the county inhabitants, held at Annapolis, September 12, 1775. In January, 1776, he was appointed First Major of the Elk Ridge Battalion, and in July following the Council of Safety appropriated £690 to enable him to carry on the manufacture of saltpetre.—*American Archives*, 4th series, Vol. III, p. 693; Vol. IV, p. 736; Vol. V, p. 1596; Vol. VI, p. 1505; 5th series, Vol. I, p. 1342.

WARFIELD (WALTER) was Surgeon of the Second Maryland Regiment in June, 1781.—*Saffell's "Records of the Revolutionary War,"* p. 235.

WATERMAN (PHILLIS) was allowed 15s. in September, 1776, and the same amount in October, 1776, by the Maryland Council of Safety, for nursing the sick in the hospital on the Western Shore.—*American Archives*, 5th series, Vol. II, pp. 627, 639.

WATERS (WILSON), aged 77 years, of Anne Arundel County, was placed on the pension-roll, August 31, 1832, for services as Surgeon's Mate in the hospital department.—“*Pension Roll,*” Vol. 13, p. 45.

WELCH (ROBERT) was commissioned September 2, 1776, by the Maryland Council of Safety, Assistant Surgeon of Col. Ewing's Battalion of Flying Camp.—*American Archives*, 5th series, Vol. II, p. 626.

WIESENTHALL (CHARLES FREDERICK), of Baltimore, was elected a member of the Baltimore County Committee of Observation in January, 1775. In December, 1775, he was appointed supervisor of the manufacture of saltpetre for Baltimore County, and March 2, 1776, he was commissioned by the Maryland Council of Safety, Surgeon of the Maryland Battalion. He received various commissions and offices of trust from the Council of Safety.—*American Archives*, 4th series, Vol. IV, pp. 725, 984, 1700, 1705; Vol. V, pp. 186, 1010, 1540, 1552, 1571; Vol. VI, p. 1459; 5th series, Vol. I, pp. 112, 433, 758, 942, 1056, 1091, 1331, 1332, 1339; Vol. II, pp. 210, 347, 458, 660.

WOOTTON (SPRIGG) was elected a member of the Frederick County Committee of Observation, and of the Committee of Correspondence, at a meeting of the inhabitants of the county, held September 12, 1775.—*American Archives*, 4th series, Vol. III, p. 694.

WOOTTON (THOMAS SPRIGG) was elected June 11, 1774, at a meeting of the inhabitants of the lower part of Frederick County, a member of the Committee of Correspondence, and a member of the Committee to attend the meeting of the General Committee at Annapolis. He was a delegate from Frederick county to the Maryland Convention in June, 1774, and July, 1775.—*American Archives*, 4th series, Vol. I, pp. 403, 439; Vol. III, p. 101.

of the physicians—all I have been able to collect—who petitioned the Legislature for the charter. The sketches are arranged in alphabetical order.*

* BIOGRAPHIES OF THE CHARTERED MEMBERS OF THE MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

DR. ASHTON ALEXANDER was a native of Virginia, but long a resident of Baltimore, and one of the chartered members of the Medical and Chirurgical Faculty or Society of Maryland. He died at his residence in Baltimore, March 1855, at the age of eighty-six. He received the degree of Doctor of Medicine from the University of Pennsylvania in 1795. His thesis was on the "Influence of one disease on the cure of another." As a physician and a gentleman he was greatly beloved.

DR. JAMES ANDERSON, a native of Maryland, died at Rockville, Montgomery County, May 9th, 1836, aged seventy six.

DR. JAMES M. ANDERSON, JR., of Kent County, was the eldest son of a well educated Scotch physician of the same name who settled in that county. His preliminary studies were prosecuted at Washington College. He studied medicine with his father, and also under Dr. Rush. As the custom then was, he attended one course of lectures at Philadelphia, and then went to Edinburgh, where he received his medical degree. On his return he was associated with his father in practice, and enjoyed a high reputation both as physician and surgeon. He was also one of the petitioners for the charter. He died at his country seat, near Chestertown, December 8, 1820, aged sixty-nine.

DR. JOHN ARCHER, a native of Harford County, Maryland, was the first graduate in medicine at the University of Pennsylvania, in 1768, when he received the degree of M. B. He was an ardent patriot in the Revolution, and a member of the Committee of Correspondence for Harford County. He was public-spirited and an influential citizen, as well as a skilful physician, and filled many positions of honor and trust in the State. He was one of the petitioners, and is named in the charter of the Medical and Chirurgical Faculty of Maryland. He married Catherine, eldest daughter of Thomas Harris. A number of his sons and lineal descendants have held prominent positions in the profession and under the government. He died in Harford County, Maryland, September 28, 1810, aged sixty-nine.

DR. JOHN ARCHER, JR., eldest son of Dr. John Archer, was born in Harford County, Maryland, May 23, 1768. He received a liberal education. He studied medicine with his father, and at the Philadelphia Medical College, and then commenced practice in his native place. In May, 1803, he was married to Elizabeth Philips, by whom he had two sons and one daughter. His oldest son, John T. Archer, also studied medicine. The Doctor was one of the chartered members of the Medical and Chirurgical Faculty of Maryland. He died at his residence on Bush Run, Maryland, October 7, 1821.

DR. WILLIAM BEANS, JR., a native of Maryland, one of the petitioners, and is named as one of the incorporators of the act of incorporation of the Medical and Chirurgical Faculty of Maryland. He resided at Upper Marlboro', and enjoyed, throughout life, an enviable reputation as a physician and a citizen. He died at his residence, October 12, 1828, in his eightieth year.

DR. CHARLES A. BEATTY, born in Pennsylvania, 1702, died in Georgetown, D. C., October 13, 1838, aged seventy-six. His academic education was received under Rev. Dr. Balch, at Lower Marlboro'. He attended a course of lectures at the University of Pennsylvania. He practised for some time on the Patuxent, but in 1780 or 1781 removed to Georgetown, where he obtained a good professional business. He served for some time as surgeon in the army, but resigned in 1800. He married Eunice Beall. He laid out on his lands adjoining Georgetown, an extension known as Beatty and Hawkins' Addition. The Doctor is named as one of the incorporators of the Medical and Chirurgical Faculty of Maryland.

DR. MORGAN BROWN, a native of Kent County, Maryland, and one of the

During the long and honorable existence of the Medical and Chirurgical Faculty of Maryland, its ranks have been filled by

chartered members of the Medical and Chirurgical Faculty of Maryland. He received his academic education at Washington College, Maryland. He studied medicine with Dr. Edward Worrell, and attended one course of lectures at the University of Pennsylvania. He was a successful and popular physician of Kent County, and died at his residence in the summer of 1842, aged seventy-three.

Dr. GUSTAVUS BROWN, a native of Maryland, practised with success for many years in St. Mary's County. He was the grandson of Dr. Gustavus Brown, Sr., who came from Scotland to Maryland, and settled at Rich Hills, in Port Tobacco, early in the eighteenth century. The subject of this sketch was educated in Edinburgh. He died about 1804.

Dr. GEORGE BUCHANAN, a native of Baltimore, Md., was the son of Dr. G. Buchanan, of Scotland, who emigrated to America and settled to practice in Baltimore. He was named, along with George Walker, commissioner in 1729 in an Act by the Maryland Legislature, entitled "An Act for erecting a town on the north side of the Patapsco, in Baltimore county, and for laying out into lots 60 acres of land in and about the place where one John Henning now lives," which is the present city of Baltimore. He was one of the chartered members of the Medical and Chirurgical Faculty of Md. He attended lectures at the University of Pennsylvania, where he received the degree of Bachelor of Medicine in 1785. His thesis was "The Physiology of Respiration." He settled in practice in his native place. He possessed considerable means, and was a man of great influence in society.

Dr. THOMAS CRADDOCK was in active practice in or near the city of Baltimore as early as 1771. He was one of the petitioners to the Legislature, and is named in the charter of the Medical and Chirurgical Faculty or Society of Maryland.

Dr. ARNOLD ELZEY, a native of Maryland, and named in the charter of Medical and Chirurgical Faculty of Maryland, was a resident of Montgomery county. He was commissioned a surgeon during the war of 1812, and after the war was made post surgeon at Washington, a position he retained to the time of his death, which occurred June 6, 1818, aged 60. He had a large practice, particularly among Government employees. He was one of the Vice-Presidents of the Medical Society of District of Columbia at the time of his death.

Dr. ROBERT GOLDSBOROUGH, a native of Maryland, was named in the charter of Medical and Chirurgical Faculty of Maryland, and for a number of years its President. He resided and practised his profession with great reputation in Centreville, Queen Anne's county, for over 40 years. He died September 30, 1849, aged 77.

Dr. DANIEL JENNIFER was a practitioner of repute in Charles county, and is named in the act of incorporation of the Medical and Chirurgical Faculty or Society of Maryland. He served as a surgeon in the Continental army, to which he was commissioned August 26th, 1776.

Dr. JAMES MURRAY, one of the chartered members of the Medical and Chirurgical Faculty or Society of Maryland, was for many years the leading physician of Annapolis, for nearly 61 years, and the preceptor of many physicians who rose to eminence. He died at his residence, December 17, 1819, aged 80.

Dr. JOHN OWEN, of Baltimore, was one of the chartered members of the Medical and Chirurgical Faculty or Society of Maryland. He died at his residence in Baltimore in October, 1824.

Dr. ARTHUR PEE, one of the chartered members of the Medical and Chirurgical Faculty or Society of Maryland, was a successful practitioner in the city of Baltimore and its vicinity, as early as the year 1771. He was a man of influence and physician of prominence.

Dr. JOHN T. SHAAFF was a native of Frederick county, Maryland. His parents were German. He received a good classical education, and received his degree in medicine from the University of Edinburgh. He practised for a time

more than two generations of physicians, who have inherited as a legacy the past records and prestige of an association that from its

at Annapolis, Maryland, but removed to Georgetown, D. C., where he enjoyed a good practice to the time of his death, April 30th, 1819, at the age of 65. He was one of the chartered members of the Medical and Chirurgical Faculty of Maryland. He was also a chartered member of the Society of the District of Columbia, and vice-president of the Columbia Institute.

Dr EDWARD SCOTT, one of the chartered members of the Medical and Chirurgical Faculty of Maryland, died at his residence, Georgetown Cross Roads in Kent county, October 1st, 1803. He was the son of Dr. Scott of Chestertown. He received his academic education at Washington College, Maryland. He studied medicine with his father, but was for a time a pupil of Dr. James M. Anderson.

THOMAS NOBLE STOCKETT, a native of Maryland, was a practitioner of note in Anne Arundel county, and is named in the charter of the Medical and Chirurgical Faculty or Society of Maryland. His ancestral place was near Annapolis, where he settled after the war of Independence, in which he served as a surgeon, acquired a large professional business, and enjoyed the confidence of the whole community. He died May 16th, 1802, aged 55.

Dr. HENRY STEVENSON is named in the act incorporating the Medical and Chirurgical Faculty or Society of Maryland. He engaged in the practice of medicine at Baltimore as early as the year 1763. He built a large and elegant house near the York Road. In 1768 he converted this splendid mansion, "Stevenson's Folly," to the very laudable purpose of a small-pox infirmary for the reception of young men, whom he successfully inoculated before the practice had become general.

Dr. BARTON TABBS, a native of Maryland, one of the chartered members of the Medical and Chirurgical Faculty of Maryland, died at Great Mills, St. Mary's county, Maryland, October 30th, 1818, aged 61. He had but just concluded his medical studies when the Revolutionary war began, and before the age of 20 years was appointed in the Maryland Line, commanded by General Smallwood. He served to the close of the struggle for independence, and then settled to practice in St. Mary's county, where he acquired a large professional business. He was twice married. His son Benjamin studied medicine. For many years he was one of the associate judges of the county.

Dr. JOHN TYLER was born in Prince George's county, June 29th, 1763; died in Frederick, Maryland, November, 1842. He was the son of Samuel and Susanna Duval Tyler. His paternal ancestors came to Maryland from England about 1660, and his maternal ancestors from France about 1680. Having acquired a good academic education, he commenced the study of medicine with Dr. Smith of Georgetown (now in D. C.) In June 1784, at the age of twenty-one, he went to London, and there continued his studies at St. Bartholomew's Hospital, from which he received a diploma. He also prosecuted his studies under the most noted teachers and surgeons of that day, and spent some time at the University of Edinburgh. He received a certificate of proficiency from Hunter, Baillie, Fordyce, and others. In the fall of 1785 he settled to practice in Frederick, Maryland, and soon obtained a large and lucrative practice. He married Catherine Harrison of Prince George's county, Maryland. His careful anatomical and surgical studies were of vast advantage to him in his practice. He was among the most successful in surgical operations at the time in the county, and was especially noted for his success in couching for cataract, being sent for from Richmond, Va., the interior of Pennsylvania, and to almost every point within a range of 100 miles. A record of his operations on the eye is preserved, and is in the possession of Dr. Grafton Tyler of Georgetown, D. C. He was an officer in the expedition to Western Pennsylvania, known as the "Whiskey Insurrection," when by exposure he contracted a deafness of which he was never relieved. After about twelve years' practice, having acquired a handsome estate, he retired from practice. He was one of the petitioners and is named in the charter of this society.

organisation has exercised a benign and elevating influence upon the profession of the state. The citizens of Maryland from an early period have given special encouragement to well-educated professional men, and the state has at different times supplied to other states noted physicians to dignify and shed the lustre of their eminent abilities upon the state of their adoption.*

Measures that have in the past promoted the usefulness of our profession deserve to be kept in remembrance; but it is also our duty not only to keep advancing our knowledge in all that pertains to medical science, but likewise to make the discoveries in medicine and improvements in hygiene available and useful to the public. In these respects the state of Maryland, and particularly

Dr. CHARLES ALEXANDER WARFIELD is named as one of the chartered members of the Medical and Chirurgical Faculty or Society of Maryland. He was a patriot and a surgeon of the Revolution. Died at Bushy Park, Anne Arundel county, Maryland, July 29th, 1813. He took a prominent part in the measures which led to the destruction of the cargo of tea in the harbor of Annapolis in October, 1774, just before the outbreak of the Revolution.

Dr. WILSON WATERS, a practitioner of Anne Arundel county, was a surgeon in the Revolutionary War. He is known as one of the chartered members of the Medical and Chirurgical Faculty or Society of Maryland. He died at his residence in Anne Arundel county, Maryland, February 5th, 1836, aged 78.

Dr. JOHN WOOLFORD, a native and a resident of Somerset county, was one of the petitioners for, and named in the charter of the Medical and Chirurgical Faculty of Maryland. He was a man of sterling worth and great influence in his section. He died in Princess Anne, in Somerset county, November 15, 1836, aged 76.

Dr. CHARLES WORTHINGTON was born near Annapolis, October 9, 1759, and died in Georgetown, D. C., September 10th, 1836. He was the son of Colonel Nicholas Worthington, of "Summer Hill." Having acquired a good academic education, he studied medicine with Dr. James Murray, of Annapolis. He attended lectures at the University of Pennsylvania, and in 1782 received the degree of Bachelor of Medicine. On his return home he was appointed to the "Maryland Flotilla," doing duty in the Chesapeake Bay. On the recognition of American Independence, he settled to practice in Georgetown, D. C., where he continued to enjoy a large professional business to the close of his life. In 1788 he married Elizabeth Booth, of Williamsburg, Va. The Doctor was the leading physician of Georgetown before the District of Columbia had an existence. He was one of the chartered members of the Medical and Chirurgical Faculty of Maryland. In 1817 the Medical Society of District of Columbia was chartered; he was one of the physicians included in the act of incorporation. He was annually elected President of this latter society until 1829, when he declined further election.

Dr. SAMUEL YOUNG, of Hagerstown, Md., is one of the chartered members of the Medical and Chirurgical Faculty or Society of Maryland. He died at his residence in the summer of 1838, in his 100th year. He was greatly esteemed for his worth as a man, and for his skill and experience as a physician.

*Although instances of this kind are comparatively numerous, I will only mention the names of Drs. THOMAS and PHINEAS BOND, brothers, who studied medicine with Dr. Hamilton, of Annapolis, Md., and then settled to practice in Philadelphia, and through long lives occupied the first rank in the profession in that city of great medical reputation.

the city of Baltimore, have fully kept pace with the requirements of the times, by the establishment and support of educational, benevolent, and curative institutions. But through the liberal gift of one of your lately deceased citizens you are afforded an opportunity for the establishment and support of a University and hospital, with an ample fund, such as has not occurred in the history of the world. It is scarcely necessary to say that the founder of this magnificent charity, Johns Hopkins, lived and acquired his wealth in this city, and most nobly and judiciously has he provided for its perpetual usefulness.

It may well be asked, do the City of Baltimore and the State of Maryland fully appreciate the importance of this great trust? Will the trustees and managers come fully up to the requirements of the age and the expectation of the medical profession, so as to make these institutions the best of their kind? Nothing seems to be wanting to secure this end. I have the utmost confidence in the wisdom and ability of the trustees, and in their disposition to take counsel so as to select the best plans and adopt the most advanced views of hospital construction and management. Every hospital of necessity becomes a sort of clinical college. But with this university let there be the most complete and convenient physiological and chemical laboratory in America; and also all the requirements of a first-class medical school, so that the profession and the public may bless the memory of its founder and its managers for all time to come.

Your State Board of Health, authorised under a liberal state law, has been organised with intelligent sanitarians to conduct its workings. Their judicious management must popularise its purposes and render it useful to the public. This institution is destined to become an agent of great importance in protecting the public health. Through it the profession will be supplied with a class of facts connected with the vital statistics of Maryland, and be put in possession of the knowledge of the conditions that depress the vital energies or cause excessive mortality in particular parts of the state. It is to be regretted that the facts collected by the United States census bearing upon vital statistics have not been reported by the smaller political divisions of cities, towns, and counties, instead of merely by states and districts, as this omission

impairs their usefulness for comparison. To meet this want in part, and to assist the mind to appreciate the whole number of physicians in the State, the population and territory over which their labors extend, I have constructed a table, from data furnished by the United States census report, giving, as far as practicable, these facts, which is appended as a note.*

The configuration of the State of Maryland, and its geographical position, lying as it does along the Atlantic ocean and the Chesapeake bay, ensures for all the level tide-water region a mild climate; while the elevated western portion is rugged and mountainous, with a lower temperature and a generally more bracing air. The figure of the State upon the map resembles to some extent a right-

* In 1850 the whole population was 583,034, of whom 990 were physicians, a proportion of one physician to every 588 of the population. The total mortality for the year was 9,621. In 1860 the whole population was 687,049, of whom 1,093 were physicians, being one physician to every 628 of the population. The total mortality for the year was 7,374. In 1870 the whole population was 780,894, of whom 1,257 were physicians, being one physician to every 621 of the population. The total mortality for the year 1870 was 9,740. Further details will be found in the accompanying table:—

COUNTIES.	Popula-tion in 1800.	Physicians in 1800.	Popula-tion in 1870.	Physicians paying In. Rev. Taxes, 1870.	One Physician in 1870 to every	Number of Square Miles.	Physician to each sq. mile in 1870.
Alleghany....	6,303	5	38,536	27	1,430.96	1108	41.03
Anne Arundel	24,061	10	24,457	35	698.77	492	14.00
Balto. C. & Co.	59,306	12	330,741	425	777.74	716	1.68
Caroline.....	9,226	4	12,101	19	584.25	330	12.01
Calvert.....	7,307	5	9,865	18	548.05	235	13.00
Carroll.....			28,619	63	453.93	453	7.01
Cecil.....	9,038	5	25,874	29	892.20	409	10.41
Charles.....	19,172	4	15,738	23	684.29	499	29.07
Dorchester ...	15,343	5	19,458	22	884.45	770	35.02
Frederick....	30,523	5	47,572	86	552.68	642	7.46
Harford.....	3,070	4	22,605	35	645.85	480	13.07
Howard			14,150	21	673.80	300	14.28
Kent	11,771	5	17,102	24	712.58	318	18.25
Montgomery..	15,058	6	20,563	35	587.65	508	14.51
Prince George	21,185	5	21,138	43	491.58	500	11.63
St. Mary's....	14,857	5	14,944	23	642.75	429	18.69
Somerset.....	17,358	5	18,190	14	1,299.28	536	38.28
Talbot	13,436	4	16,137	18	896.5	360	20.00
Queen Anne..	14,857	5	16,171	22	735.04	422	19.63
Washington..			34,712	62	550.19	463	37.62
Wicomico....			15,802	14	1,128.71	400	8.50
Worcester	18,552	5	16,419	16	1,020.18	596	27.26
Total.....	312,806	105	780,594	1,074		10976	

angled triangle, the right angle being at the north-easterly corner. The base of the triangle is the northern boundary, running east and west 190 miles along the southern border of Pennsylvania. The eastern boundary along the State of Delaware is the perpendicular line of the triangle, and runs almost due south to the southern limit of the latter State, and thence east to the Atlantic ocean. The hypotenuse of the triangle is formed from the "Fairfax Stone" standing in the south-western corner, and by the windings of the Potomac River, the general course of which is south-east. The State of Maryland is traversed from her northern border in an almost southerly direction by the Susquehanna river and Chesapeake bay to the southern boundary, something over 140 miles, and having a width varying from seven to twenty miles, thus dividing the state into what is familiarly known as the Eastern and Western Shores. About one-tenth of the whole area of the State is covered with water, much of it salt. This broad sheet of water no doubt contributes largely, by imparting its heat in winter, to moderate the extremes of temperature which occasionally visit other states lying in the same latitude. The annual rainfall throughout tide-water Maryland is abundant; being about forty-six inches for a few miles along each shore of the bay, and through the rest of the alluvial lands about forty-four inches. The mean annual temperature for the year for the southern counties is given by Prof. Lorin Blodgett at 58° Fahrenheit, being 4° warmer than it is at Baltimore or Washington; and throughout the middle counties of the Eastern and Western Shores the mean annual temperature is two degrees milder than it is in Baltimore. These climatic conditions are quite sufficient to make a great difference in the inauguration and success of various enterprises and agricultural pursuits. Something like one-half of Maryland may be geologically considered as drift or alluvial. The limits of the two formations will in a general way be indicated by the line taken for the construction of the railroads from Baltimore to Washington, and from Baltimore to Philadelphia by way of Havre-de-Grace. All the lands lying south and east of this line belong to the more recent geological formations. As might be expected, the tide-water region is co-extensive with the alluvial formation throughout the State, and is but slightly elevated above tide.

In studying the topography of Maryland, I have availed myself of all the geological, railroad, and canal surveys that I could find; and as I proceed, shall present profiles of some of these surveys, as they form largely the data from which my deductions are made as to the contour of the section through which they pass. I do not in this address claim that degree of accuracy of statement and description which a personal inspection or survey of the state for the special purpose of a report upon the physical geography, would have ensured. I assume that every physician comprehends the great influence that the topography of a state or section of country, its drainage, its water-courses, its elevation above tide, its ponds, marshes, hills, uplands and mountains, have upon health.

The highest ridge crossed by the surveys for a canal, and also a railroad between Washington and Baltimore, is near Waterloo, and is but 200 feet above tide.* (See profile marked A and B.) The land upon the Eastern Shore, but more particularly the four southern counties, except for limited areas, rise but a few feet above tide. Perhaps they do not give an average elevation of above fifteen feet. Taking the whole Eastern Shore, the average elevation would not be over forty feet above tide.

I am enabled to give a profile, marked C, of the Eastern Shore, taken from Prof. P. T. Tyson's geological map of Maryland, as given in Martenet's Atlas. Although made to illustrate the geology of the section, it also gives a correct impression of the elevation of the whole Eastern Shore.

The Western Shore, or Southern Maryland as it is sometimes called, embraces all the territory between the Potomac river and the Chesapeake bay. The highest points of land on the Western Shore are near Washington;† some of them within

* These surveys cut across all the ridges and streams between Washington and Baltimore. The Elkridge and Annapolis Railroad follows the divide between the Severn and South rivers from the city of Annapolis to the Annapolis Junction on the Baltimore and Washington Railroad. The point of bisecting the Baltimore and Potomac Railroad is 179 feet above tide. The hill just west of Annapolis is 150 feet, and the Coast Survey Signal Station, near Annapolis, the highest available point, is 247 feet. It is probable that there is no land in Anne Arundel county that is 300 feet above tide.

† Fort Meigs, $3\frac{1}{4}$ miles east of the Capitol, is 304 feet above tide. Fort De Russy, just west of Rock Creek, is 354 feet, and Fort Gaines, also west of Rock Creek and northwest from the Capitol, but within the District, is 403 feet. The two last named forts are west of the line suggested as dividing the tertiary from the older geological formations of the State.

the District of Columbia, which on account of their height were selected as points for the location of batteries and fortifications for the protection of Washington during the war between the States. Fort Meigs is probably the highest point of land in southern Maryland.

To give a more comprehensive and graphic view of the general elevation and contour of the Western Shore, I have had copied profile marked D, from Prof. Tyson's geological map of the country along the Potomac river. This line runs a little east of south from Washington city, to the mouth of St. Mary's river.

I also present a profile, marked E, of the survey of the Baltimore and Potomac Railroad from Bowie to Pope's creek, the general direction of which is a little west of south. The latter gives the highest ridges and lowest depressions encountered on the line, and not the track of the road, which follows the divide between the Patuxent and the Potomac rivers. The highest ridge encountered on the line is a little north of Cheltenham station, and is two hundred and forty-four feet. The average elevation of the road is perhaps but little over one hundred feet. The ridge or divide is in many places narrow, in others it extends on either side for several miles. Swamp and overflowed lands are to be found in many places along all the streams that enter the Potomac, the Patuxent, and Chesapeake Bay.* The extent of low and over-

I am indebted for the following elevations of points, chiefly in Southern Maryland, to J. H. Alexander's Geological Map of Maryland, published in 1840:

In St. Mary's county a hill west of Leonardtown 100 feet, a hill a little northwest of Great Mills 200 feet.

In Charles county a hill southeast of Newport 150 feet, a hill east of Budd's Ferry 100 feet, a hill west of Nottingham 150 feet.

In Prince George's county a hill east of District line, believed to be Silver Hill, 300 feet, a hill north of Upper Marlboro' 100 feet, a ridge running in a northwesterly direction from Marlboro' 150 feet.

In Montgomery county a hill northeast of Great Falls 250 feet, a hill northeast of Rockville 250 feet, a hill northwest of Beltsville 300 feet, Iesborn's Cross Roads 300 feet, a hill northwest of Iesborn's 400 feet, a hill west of Waterloo 350 feet.

In Carroll county a hill east of Westminster 700 feet, a ridge northwest of Manchester 800 feet, a hill near Union Mills 700 feet.

Frederick County Valley 400 feet, Middletown Valley 500 feet.

In Washington county, forks of Antietam creek 400 feet, ridge at Bakersville 450 feet, Hagerstown 600 feet; Stone Fort, Maryland Heights, one and a half miles east of Potomac, 1300 feet.

In Calvert county, on the peninsula between the Patuxent and the Chesapeake Bay, a hill west of Cove Point 100 feet; a hill near Prince Frederick 150 feet.

* The following are the names of the more important streams emptying into the Potomac River on tide-water:

flowed lands increases as you descend toward the southern counties. St. Mary's county is nearly level. Large tracts of her land are

Rock creek and the Eastern Branch or Anacostia, within the District of Columbia.

In Prince George's county, the first stream that enters in descending the Potomac is Oxen creek. Immediately below Fort Foote, Broad creek or Hensen Branch.

To the south of Fort Washington, comes in Piscataway creek with its broad mouth. This stream extends almost across the county to the divide, which in this region is near the Patuxent. Along this stream there is low ground, and at certain seasons much water-soaked land.

The Pomunkey creek enters the Potomac from Charles county, running in a south-westerly direction.

Mattawoman's creek, which drains a large area of Charles county, empties into Potomac, 27½ miles below Washington. The head-waters of this creek rise in Prince George's county, within a few miles of the Patuxent. There is not only much water-soaked land along its course, but at times there is much back-water.

Nangemoin sound or creek empties into the Potomac river, fifty-two miles from Washington, by a broad and deep mouth. This creek is not long, but is divided into a number of branches, which retain for some miles a considerable breadth, and along which there is a good deal of low land.

Port Tobacco river enters the Potomac about ten miles below Nangemoin. This river has a deep, broad channel, through which, at one time, was carried on with the town of Port Tobacco a considerable trade. Recently, the upper end of the channel has been filling up.

Pope's Creek enters fifty-eight miles below Washington. This is the terminus of the Baltimore and Potomac Railroad, of which a profile of the country through which it passes is given in another place.

The Wicomico river, the largest one emptying into the Potomac, is the line dividing Charles from St. Mary's county. It is a wide, deep stream, running through Charles county some fifteen or twenty miles, and is then continued in a north-easterly direction. From the head of this river runs across Charles county, Zakia Swamp or Creek, emptying into the Wicomico at a point known as Allen's Fresh.

The Choptank creek runs westerly out of St. Mary's county, and also empties into the Wicomico.

St. Clement's bay rises in the north-western part of St. Mary's county, from the divide of the Patuxent, and runs in an almost directly southern course through St. Mary's county, and empties into the Potomac eighty-six miles below Washington. This bay has numerous branches, draining a large area of rather low but rolling land.

Breton's bay is eighty-eight miles from Washington, extending well up into St. Mary's county, in a north-easterly direction, with very deep water and good navigation for large steamers for six or eight miles, its head-waters arising from the divide between the Potomac and Patuxent. St. George's river enters just south of Piney Point; the last is a sluggish stream draining but little land, and indeed, they all should be termed rather marshes than creeks, as is Flood's creek, Poplar creek, Back creek, and Hunting creek.

St. Mary's river runs in a southerly direction, emptying into the Potomac 99 miles below Washington, through a broad bay-like mouth of very deep water. It affords good navigation for large vessels some 12 miles or more. The town of St. Mary, on this river, was the site selected by the first settlers of Maryland in 1634. It was for several years the capital of the colony, now the State of Maryland. It is to this locality the earliest mention of the practice of medicine within the State is referred.

With St. Inigoes and Smith's creek we close the list of the chief streams that drain Southern Maryland into the Potomac.

covered at certain tides and seasons, and during the prevalence of particular winds.

The data for compiling a complete hypsometric map of Maryland have never been collated, although much labor toward this end has been expended by Prof. Alexander; but from a discussion of all the available facts bearing upon the question, I estimate that from eighty to one hundred feet would be a fair average elevation for the whole Western Shore.

But I ought to assume that the members of this Association are more familiar and better informed on the subject of the physical geography of Maryland than myself.

At first sight it would seem singular that the tide at Washington, D. C., should have a mean rise of three feet, while at Baltimore it has but 1.3 feet, at Point Lookout 1.4 feet, and at Annapolis but 0.9 of a foot.* This is accounted for by the great depth and width of the Chesapeake Bay, the tides in it partaking of the character of ocean tides; while in the Potomac the tides are of the character usual to rivers that become rapidly shoal and narrow.

I dwell upon the tide-water region of the State because it is the section of all others requiring the genius and skill of the best hygienist to make it salubrious. The climate is admirable, and the soil, though thin in sections, could soon be made, and as easily kept, fertile, and its healthfulness improved. Elevated localities are more healthy than low ones, and I hold that there is a progressive degree of salubrity from tide-water to an elevation of over two thousand feet.

While maintaining these views, I believe it to be the duty, indeed an obligation resting upon the profession, as far as possible, to render habitable, through the aid of sanitary science and professional skill, every locality where man finds it profitable or desirable to dwell. There are but few places in the world where the genius of man, when earnestly directed to the measure, has not been able to so change existing natural conditions, or so modify habits and modes of life, as to conduct expeditions and prosecute enterprises with a very considerable degree of safety to health. I am inclined to believe that the chief drawback or check to the development and increase of wealth and population in tide-water Mary-

* Coast Survey Report, 1861.

land is the malaria that infests this region. This mysterious poison is only known by its effects. We can neither see it nor handle it. Judging from the localities where it is most abundant, we know three factors favor its production: heat, moisture, and exhalations from decaying matter, particularly when in connection with shallow ponds and water-soaked soil. We also know that its favorite haunts in the United States are the lowlands, the sea-shore, and the water-courses flowing toward the ocean below 1,000 feet above tide.

In the discussion of this subject I aim to stimulate effort and keep alive the hope of the profession and of the people, that some sanitary measures may yet be adopted, or a prophylactic supplied, that will make it possible for the inhabitants of the tide-water portion of the State to enjoy as high a degree of vigor and health as the residents of the more elevated western counties. I am inclined to think that it would not be an over-estimate to place the loss of time from sickness solely attributable to malaria, that each laborer throughout this portion of Maryland sustains, at an average of ten or fifteen days in the year. In addition to this actual loss of time, there is suffered by the whole population a depression of the vital forces, that is a most serious drawback to the success of the various enterprises essential to the accumulation of wealth and support of a dense population. In the early part of this century, Frederick, Washington, and other counties suffered from miasmatic fevers. Improved modes of farming, and particularly the ditching and underdraining of the water-soaked lands and the drying up of all stagnant ponds, have made them among the healthiest counties in the State. Fortunately, improved agriculture and sanitary measures harmonise perfectly, and ought to co-operate and march hand-in-hand, each demanding that when the soil is water-soaked that it be dried, either by surface or under-drainage.

Gentlemen, you know better than I how far the tide-water counties are susceptible of improvement in this direction. It is to this end that the topography of the State should be studied by medical men. That large tracts of land in the State lying along the streams emptying into tide-water have been considered valueless because of stagnant ponds, but which may be recovered and made profitable for agricultural purposes, and at the same time redeemed from being hotbeds of miasm, is certain; and the accomplishment

of this work but a question of time in the progress of sanitary science. I wish to be permitted to suggest, what may have occurred to many of you, namely, that the Legislature should be requested to appoint a competent civil engineer, to act in conjunction with the State Board of Health, and of which he should be a member. He should make a complete survey of all the swampy, badly drained, and water-soaked lands of the State, and suggest measures for abating the nuisance, with an estimate of the cost. Every acre of land redeemed from swamp to successful agriculture, will to that extent increase the wealth and improve the salubrity of the neighborhood. Owners of land build their houses and tenements without the least regard to sanitary conditions. Health, the most important consideration for a residence, is generally not thought of. Nearly every tract of land requiring a dwelling-house upon it, presents sites likely to be selected by an engineer or hygienist, and under the influence of such teaching would lead to vast improvements in public health. The intelligence of the age demands that the judgment and opinion of competent sanitarians ought to be taken as to the healthiest locality and construction of dwelling-houses, in the rural districts as well as in cities.

The physician owes it to the community to make a study of the salubrity of the region into which he is called to practise, and particularly to discover the agents that undermine the vigor of the inhabitants, and to set himself earnestly to remedy these evils.

An act to facilitate the draining of lands in certain counties in Maryland was passed by the Legislature as early as the November session of 1790. The act was amended in 1799, so as to extend and include other counties. I have not had time to investigate what late legislation there may have been upon this important subject. These laws left the initiation of this work with the people owning the lands, and looked wholly to their increased value and productiveness. Now the principle that should rule in this matter is the preservation of the public health, which in all cases is public wealth. The State becomes a party to an act of folly, if not one of crime, when it permits the continuation of a pond or marsh generating miasmatic poison that ordinary engineering skill might prevent.

Every measure that tends to improve health will encourage a denser population, and bring into prominence portions of the State perhaps hitherto neglected, but with judicious management can be made to attain inexhaustible productiveness.

The extensive beds of shell marl that exist throughout tide-water Maryland, which your agricultural chemists and geologists have so well described and accurately pointed out as existing in different parts of the State, if utilised, will for all time keep the lands fertile.

Low swampy sections too are more likely to suffer from want of pure wholesome water for drinking and domestic purposes, than well drained sections. It is a recognised fact that spring and well-waters are always affected by the soil or rock strata through which they percolate. The sources of supply too may be contaminated from closets, foul pools, stables, and the like. Your State Engineer, Agricultural Chemist and Geologist, are eminently qualified to point out the regions where the drinking waters are poor, or the source of contamination, if any exist, and make suggestions to secure a supply of healthy rain-water by cisterns or otherwise.

The collecting and preserving of ice for domestic use is conducive, not only to comfort, but to the better preservation of meat and other table necessaries, and consequently promotes public health. Everything that will tend to preserve eatables in the freshest and most palatable state will aid health.

That portion of the State lying north and west of the railway from Washington through Baltimore to Philadelphia, occupies a higher plane, and has a different soil from the tide-water portion of the State. This first bench or plateau may be described as foot-hills to the mountains that rise farther west.

The geology and the soil of your State have been so carefully studied and so accurately described, that I will not attempt to add anything to that department of her history, or take up your time by alluding to geological strata, farther than seems important to describe the topography and source of water-supply, as they both exercise important influences over the public health. This belt of foot-hills lying between the alluvial lands and the foot of Parr's

Ridge, has a width varying from twelve to twenty-five miles, but which at no point perhaps rises to a height of much over six hundred feet. It crosses the State south-westerly, directly from the Susquehanna river, through Harford, Baltimore, Howard and Montgomery counties, to the Potomac river.

I am enabled, through the courtesy of J. M. Hood, President of the Western Maryland Railroad, to present a profile, marked F, of a survey of a proposed railroad from the Susquehanna river, at the mouth of Deer creek, to Howard's Switch, on the Philadelphia, Wilmington and Baltimore Railroad, about eight miles north-east of Baltimore. This survey runs in a south-westerly direction through Harford and Baltimore counties, and crosses all the ridge in this section of the State. Riddle's Summit, 275 feet, is the divide between the Great and Little Gunpowder; the next point as you approach Deer Creek is Booth's Summit, 367 feet.* This proposed road traverses a rolling, or rather rugged section. The south-western portions of Howard county, and adjacent parts of Montgomery and Prince George's, are quite flat, and with much imperfectly drained land, which exercises an unfavorable influence upon the health of that section.

We will now turn our attention to Western Maryland; and by the courtesy of the President of the Western Maryland Railroad company, I am enabled to present a profile, denoted G, of the country through which this road passes from Baltimore to Williamsport. Between these points, it is the line of greatest average elevation of any survey I have seen. About ten miles from Baltimore,

* The highest point of land within this belt is to be found near Reisterstown, where the track of the Western Maryland Railroad is 610 feet above tide.

Catonsville, Ellicott City, and Elk Ridge, are high, but do not attain an equal elevation. Elk Ridge has points of nearly the same elevation.

The Coast Survey Signal Station, selected because of its being the highest available point in the vicinity of Washington, is located on Mr. Stabler's farm, eighteen miles almost due north from the Capitol, and is by actual measurement 470 feet. This belt has much valuable agricultural land. It is drained north-east of Baltimore by Jones' Falls, the Little and Great Gunpowder rivers, Winters' and Bynn's runs, and by Deer creek; the latter empties into the Susquehanna River. South of Baltimore it is drained by the Patapsco and its branches, the Patuxent, the Eastern Branch of the Potomac or Anacostia, the Seneca and Rock creek; the latter emptying into the Potomac at Washington. Most of these streams afford water-power along them, which is extensively used for mill purposes. This belt of the State, considered entire, has an average elevation of about 250 feet. Its soil is formed from the disintegration of the outcropping rocks and stratas of clay, gravel, &c. There are extensive quarries of granite, marble, limestone, slate, iron-ore, and kaoline.

the elevation of the track reaches 400 feet, and gradually rises until it passes Reisterstown, where it is 610 feet. This is perhaps the most elevated section east of Parr's Ridge. The next notably high point on the road is encountered on Parr's Ridge, which is crossed at Westminster at an elevation of 700 feet. The Blue Ridge is crossed at an elevation of 1370 feet. All along this road there are fine views, and a constantly varying landscape, with well cultivated farms. The general elevation of this section of the State, with its rolling and well drained lands, must secure for its inhabitants a high degree of health. All the lands of Western Maryland gradually become lower as you proceed south to the Potomac river.

Profile H is a survey of a proposed canal from the Patapsco up its west branch to Parr's Ridge, where it was proposed to tunnel for the distance of 4532 feet, at an elevation of 555 feet above tide, thence to follow the Linganore down to the Monocacy, and along it to the Chesapeake and Ohio canal.

Profile K is a part of a profile taken from Prof. Tyson's geological map of Maryland, which gives the elevation and depression from Sideling Hill to the mouth of the Patapsco, crossing all the intervening mountains and ridges.

Profile L represents the elevations on the Baltimore and Ohio railroad, from Point of Rocks to Baltimore, which crosses Parr's Ridge at Mount Airy, at an elevation of 755 feet, near the line traversed by the canal survey reported in profile H.

I present still another profile, marked M, which is the survey of the Metropolitan Branch railroad, the most southerly, and at the same time crosses Parr's Ridge at the lowest elevation of any of the five lines of surveys from Baltimore to Cumberland. This road leaving Washington in a north-westerly direction, before reaching Silver Spring Station, attains an elevation of over 200 feet. Damascus Ridge is crossed west of Rockville, at an elevation of 516 feet. This is a displaced spur of Parr's Ridge, and the latter is crossed twenty-eight miles from Washington, at an elevation of 524 feet.

These several profiles convey a very good impression of the contour of the country east of the Blue Ridge.

Parr's Ridge rises in Pennsylvania, where it is known as Slate Ridge; traverses Carroll county, Md., forming the boundary between Frederick and Howard counties; and crossing Montgomery, reaches the Potomac east of the mouth of the Monocacy river, where it is broken up into moderately elevated hills, and is throughout its whole length a healthy region. One of these spurs is known as Sugar Loaf Mountain, a noted feature in the landscape, rising to an elevation of 1300 feet. The ridge is perhaps nowhere over five miles broad at its base, but rises in many places rather abruptly. The average elevation of its summit I estimate at 750 feet. Proceeding westward across Parr's Ridge, we reach the valley of the Monocacy, known as Frederick county, which extends across the whole width of the State, and includes Frederick and Middletown valleys, a rich limestone soil with some red land. They were settled chiefly by thrifty German agriculturists, at an early period in the history of the State. A rich marl bed exists in the Monocacy, a little south of Frederick. The valley is comparatively level from north to south, and has a width of from ten to fifteen miles. It is drained by the Monocacy, which has its head-waters near Gettysburg, in Pennsylvania, and by the Tuscarora creek. The latter empties into the Potomac at Point of Rocks. The valley rises gradually from the river to Parr's Ridge, and westerly from the same stream to the Catoctin Mountain, which is a spur of the Blue Ridge or South Mountain, as it is called in Maryland. The average elevation of the valley is about 400 feet. The crossing at the Double Pipe creek, by the Western Maryland railroad, near the head of the valley, is but 280 feet above tide.

The South or Blue Ridge Mountain, a few miles from the Pennsylvania boundary, separates into two distinct ranges, both, however, extending in a south-westerly direction across the State, and having nearly equal height. At a few points their summits rise to 1600 feet, the average being between 1200 and 1300 feet, the Blue Ridge proper being the higher of the two. The more easterly branch of the Blue Ridge, in Frederick county, is known as the Catoctin Mountain. The southern extremities of these ranges, where they reach the Potomac, are about ten miles apart, the one

known as the Point of Rocks, and the other the Maryland Heights at Harper's Ferry.* The valley between these is known as Middletown valley, one of the most beautiful and fertile in the State. It has a rich limestone and red land soil, and is drained by the Catoctin creek. The average elevation of the valley is about 500 feet above tide. At Weavertown there is an immense water-power in the Potomac, which is scarcely used at all. The portion of the country lying along the Potomac is subject to chills.

Passing westward across the Blue Ridge, which divides Frederick county from Washington county, we enter what is familiarly known as Hagerstown valley, forming a part of the latter county. This county also occupies the whole breadth of the State, which at Hancock is but about five miles wide. In a westerly direction it extends from the summit of the Blue Ridge to the eastern base of Sideling Hill mountain, crossing and including North Mountain as it traverses the county in a south-westerly direction. Between the latter mountains and the Blue Ridge the land is of an excellent quality. Limestone being abundant, and the soil productive, it is among the leading wheat-producing counties in the State. This part of the country is drained by the Antietam, which has been made memorable by the great battle fought on its banks; the Coneocoheague and Licking creeks, all rising in Pennsylvania, assist in draining the region to the south-west, across Maryland, and emptying into the Potomac river. These streams have considerable fall, affording fine water-power. The lands are well drained, as is usual where limestone formations exist. The spring water in the valley partakes of the character of the rock formations; those draining from the springs of the ridge are either pure or impregnated with iron or sulphur. Mineral springs of some local note exist in the vicinity, chiefly sulphur and chalybeate; one spring is said to resemble the celebrated Bedford spring water. The average elevation of the level plane of this country, east of North Mountain, is but a little above that of Frederick county,

* The crests of the Catoctin and the Blue Ridge mountains in Maryland offer the most desirable cool and healthy sites for summer cottages to be found anywhere within easy reach of Baltimore and Washington. Families could here erect cheap frame structures, for occupancy only during the heated term, at a very moderate cost, and be within two hours of the city. The temperature at the elevation of these mountain summits would be about the same as found at Kingston in Canada. There would be less dampness than is found on the summit of the Alleghany mountains.

and probably would not exceed 550 feet; that west of the North Mountain is higher, perhaps 700 feet. Some of the lands along the Potomac are low as compared with the other portions, and such are subject to malarial diseases, but the interior portions of the county are very healthy. West of Washington county lies Alleghany, also occupying the whole width of the State. This county has within a few years been divided, forming the new county of Garrett out of its western portion. The city of Cumberland, the second in population in the State, is situated on its southern border at the confluence of the Potomac river and Will's creek. It lies nearly central between the eastern and western boundaries of the county. The average elevation of the city of Cumberland within its corporate limits is about 650 feet. The country as you go west is entirely mountainous, and traversed by a number of mountain ranges with local names,* all bearing south-west. Narrow valleys of rich arable land lie between all these mountains. In the one between Green Ridge and Polish Mountain is situated Carroll's Spring, a place of some resort in summer. There is another mineral spring at Flint Stone. The average elevation of the valleys is about 800 feet, and the whole county would probably have an average elevation of 1000 feet. This county is drained by a number of streams.† The whole country, from this to the western border of the State, presents the character of timber and soil usual to the Appalachian chain of mountains, with rapid streams and mountain vegetation. Mining and lumbering is the chief occupation of the inhabitants, who are generally noted for good health. That portion of the county situated along the Potomac river, as far west as New creek, is subject in the fall to malarial diseases. The contour of the country from the western boundary of Washington county to the north-western corner of the State is admirably shown by profile marked N, which is copied from Prof. Tyson's Geological Report of Maryland for 1840. This line follows the direction of the old National Road.

* Sideling Hill has an elevation of about 1500 feet, Town Hill 1400 feet, Green Ridge about 1100 feet, Polish Mountain 1200 feet, Warren's Mountain 1000 feet, Martin's Mountain 1400 feet, Everett's Mountain 1000 feet, Wells' Mountain 1500 feet, and Davis Mountain 1900 feet.

† Turpin's, Fifteen Mile creek, Tower Hill creek, Sawpit run, Sawmill run, Flint Stone, Snap creek, Wills' creek, Jenny's run, and George creek. The latter, the largest, forming the eastern boundary of Garrett county, and draining the valley between Davis mountain and the Great Savage mountain.

The last profile I will show is that of the Baltimore and Ohio railroad, which runs in the same general direction, but a little south of the former.

Garrett County occupies the summit of the Appalachian chain of mountains, and embraces all the north-western corner of the State, and is entirely mountainous, with an average elevation of from 1,800 or 2,000 feet. In some few places the Alleghany mountains rise to the height of 3,000 feet. About twenty miles westward from the crossing of the Great Savage mountain you encounter a range known as the Little Savage mountain, the south-western end of which, however, is called "Hoop Pole ridge." About twelve miles further west you reach Meadow mountain, and west of this Negro mountain; west of these are Keyser's ridge and Winding ridge. The summits of these mountain ranges are all above 2,000 feet. Between some of them there are valleys of comparatively flat land, with extensive natural meadows and without timber. These lands have a deep black fertile soil, making excellent pasture lands, and known from an early period of our country as "the Glades," and which extend into Pennsylvania and Virginia.

Here, on the broad summit of the Alleghany mountains, at an elevation of from 2,000 to 2,500 feet, I am inclined to believe can be found as healthy a summer resort as there is in the United States. In this vicinity the thermometer rarely rises above 85° Fahrenheit at mid-day in summer, and falls below 70° during the night. Diseases incident to children in cities, caused by continued high temperature, do not occur at this elevation, and are cured by even a short residence on the summit of the mountain. Malaria in Maryland does not rise to an elevation of over 1,000 feet. Farming is carried on to a very limited extent, but grazing and the manufacture of cheese and butter are found to be profitable. Savage river and its branches drain the extensive valley that lies between the Little and Great Savage mountains into the Potomac river. The mineral wealth of this part of the State seems to be inexhaustible. All the other valleys are drained into the Youghiogeny river by its numerous ramifying branches, and conducted through Pennsylvania to the Ohio river. These mountain streams contain an abundance of trout; and the forests

of the mountains shelter plenty of game, which invite to vigorous exercise those fond of hunting and fishing.

This region will yet draw from the cities to its cool and peaceful shades many invalids who have in the past been in the habit during the summer of going to the sea-shore. Here most invalids will be able to recuperate physical vigor with a rapidity greater than at any summer resort at a low elevation, as they can spend all the hours of the day in the open air, and at night can enjoy sound and refreshing sleep. I can not, I think, too strongly recommend this region as a summer resort for families with small children, and particularly those of moderate means, as the necessities of living are found here at minimum prices; and fashion has not yet encroached upon simple habits, or forbidden out-door exercise in the summer sun and mountain breeze.

In presenting these imperfect remarks, the best that the very brief time, allotted me for the purpose, has enabled me to put together, I have endeavored to do no more than to present a series of observations and facts, which I hope may be useful to the profession of the State, in connection with whatever measures may from time to time be adopted for the protection of the public health of Maryland. If I have accomplished anything in this direction I shall consider that my humble efforts have not been altogether futile; and if in the attempt I have trespassed unduly on your time, I trust I may be pardoned for having undertaken what seemed to be a duty.

Gentlemen, I thank you for your polite and patient attention.

Topographical Profile (A)

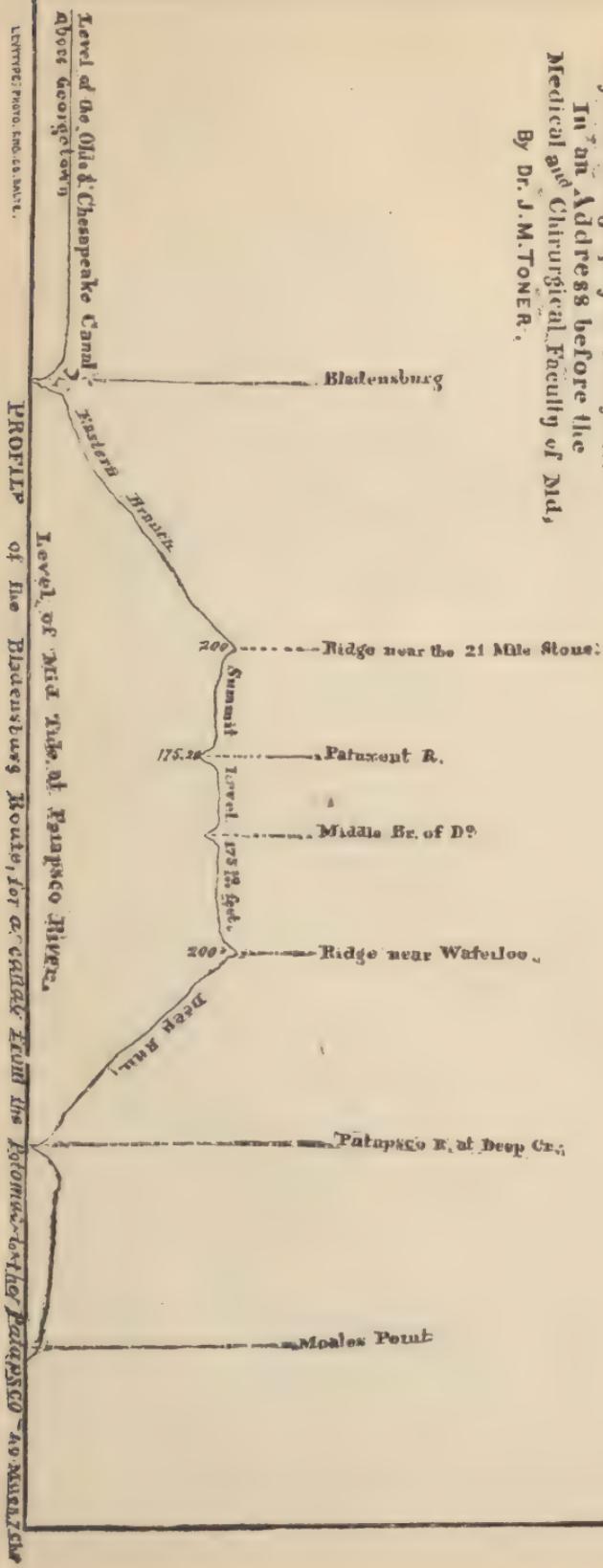
To Illustrate

Physical Geography of Maryland

In an Address before the

Medical and Chirurgical Faculty of Md,

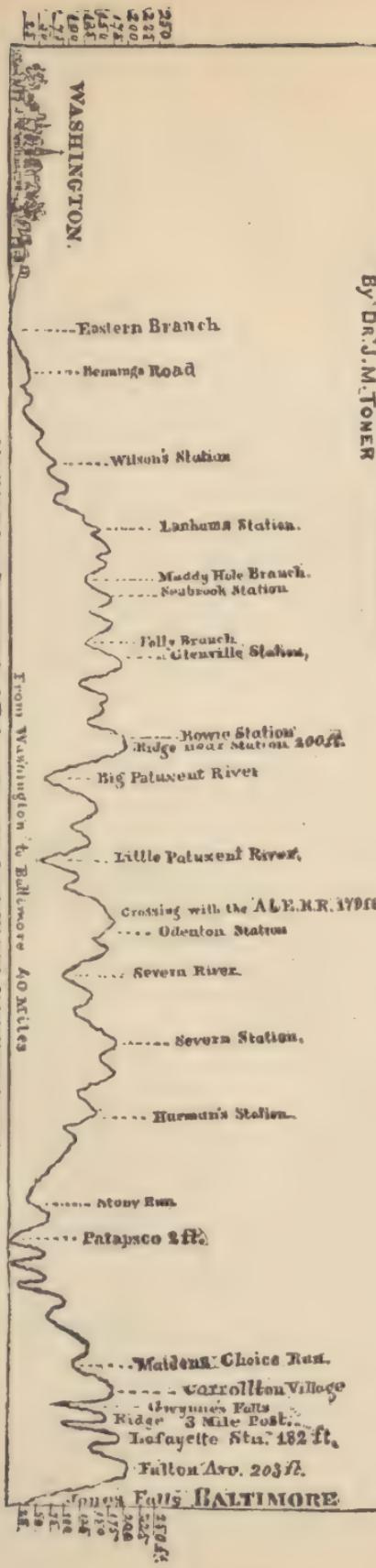
By Dr. J. M. TONER.



Topographical Profile (B)

to illustrate

Physical Geography of Maryland
In an Address before the
Medical and Chirurgical Faculty of Md.
By Dr. J. M. TOWER



LETTING PROFILE, BALTIMORE.
HIGHEST POINTS OF LAND AND LOWEST DEPRESSIONS
ON THE LINE of the BALTIMORE & POTOMAC RR Between WASHINGTON & BALTIMORE
From Data obtained from the Office of the Engineer.

500

Penn & Line

220

Zero of Tide

Elk River

Bohemia R.

Sassafras R.

Chester R.

Tuckahoe R.

Choptank R.

Hunting Cr.

Nanticoke R.

Wicomico R.

Pocomoke Bay - Tide Level

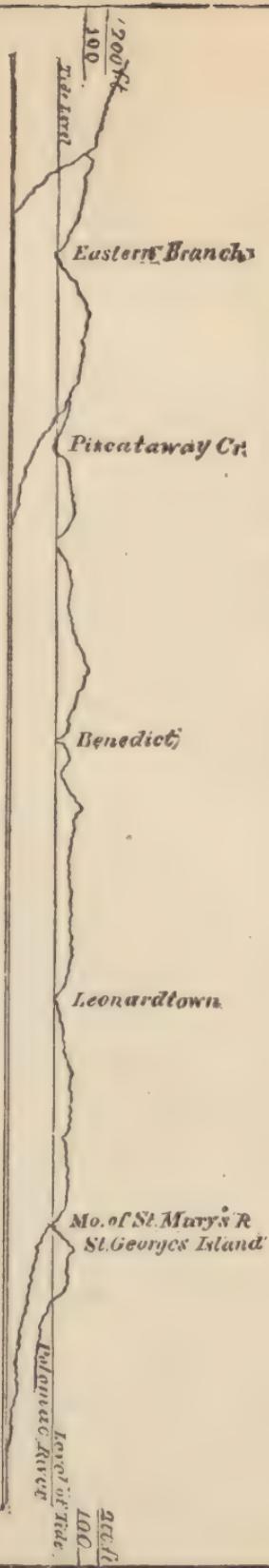
50 ft.

25

SECTION from the Pennsylvania line S. $2\frac{1}{2}^{\circ}$ E. along the EASTERN SHORE to Pocomoke Bay. 123 miles
W.C. AND W.A. SECT. SECTION
From Topographical Atlas of Maryland.

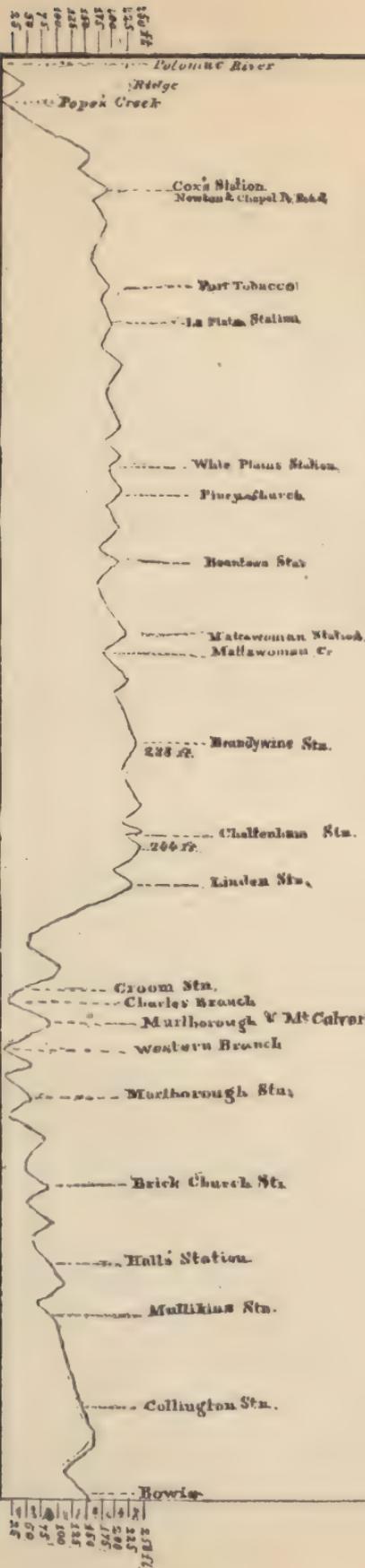
Topographical Profile (C)
to illustrate
Physical Geography of Maryland
In an Address before the
Medical and Chirurgical Faculty of Md.
By Dr. J. M. TONER,

Topographical Profile (D)
to illustrate Physical Geography of Maryland in an Address
before the Medical and Chirurgical Faculty of Maryland
By DR. J. M. TONER;



SECTION from near WASHINGTON S. 25° E. to the mouth of the St. Mary's River 100 Miles.
From Atlas of Maryland.

Topographical Profile (E)
to illustrate
Physical Geography of Maryland
In an Address before the
Medical and Chirurgical Faculty of Md.
By DR. J. M. TONER,



PROFILE of the Country traversed by the
BALTIMORE AND POTOMAC RAIL ROAD
from BOWLING GREEN to POLES CREEK 47 Miles

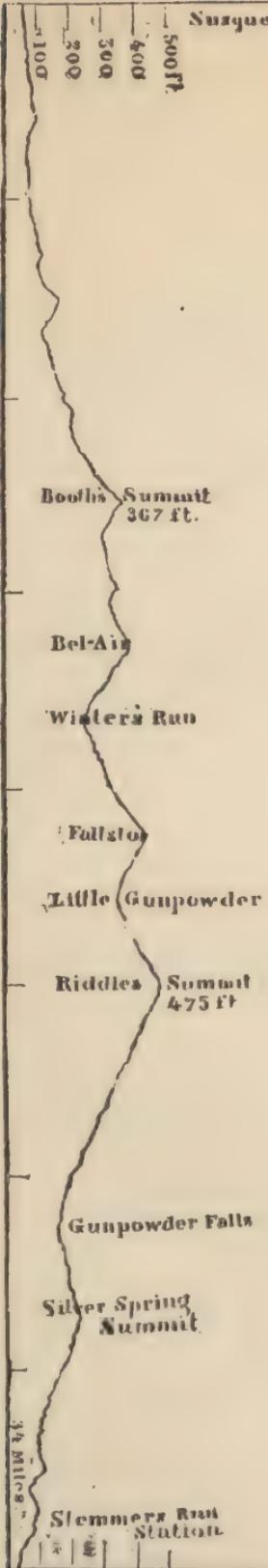
LEAVES BALTIMORE, 6 A.M.

Susquehanna River

Topographical Profile (F)

Physical Geography of Maryland

In an Address before the
Medical and Surgical Faculty of Md.
By DR. J. M. TONER;



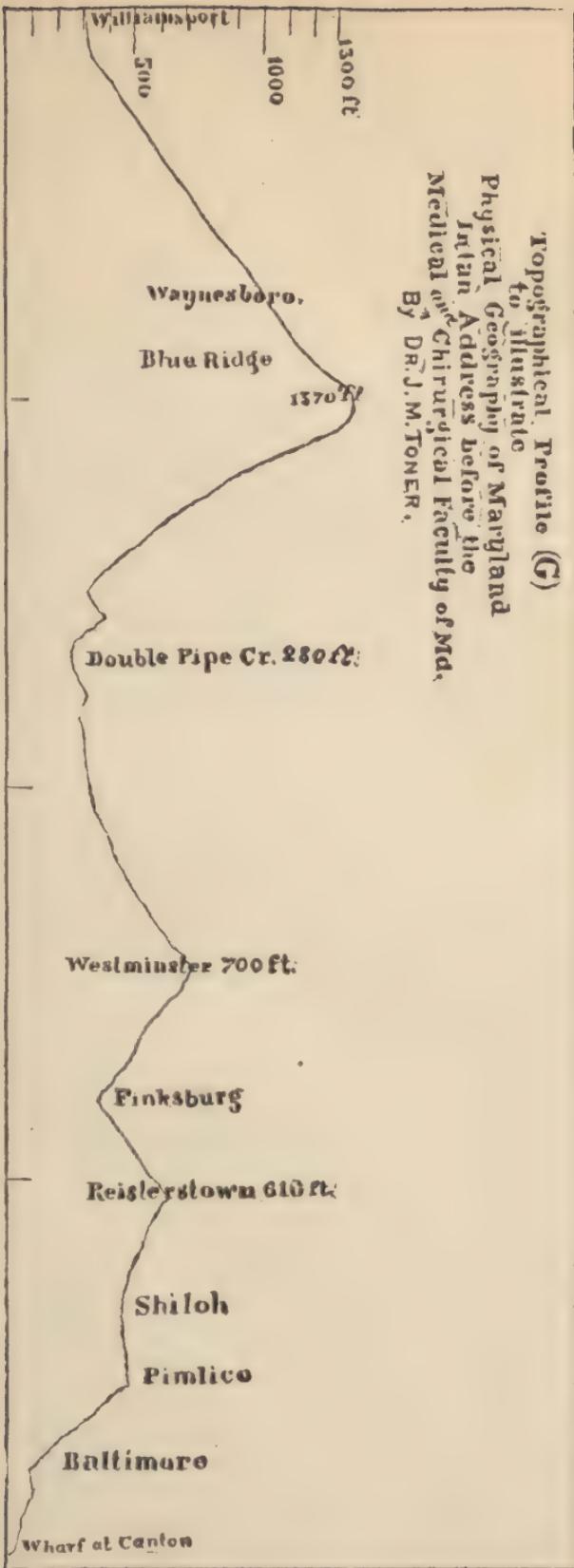
LITTLE RIVER, Etc., Etc., Etc.

PROFILE of proposed Philadelphia & Baltimore Central R.R.

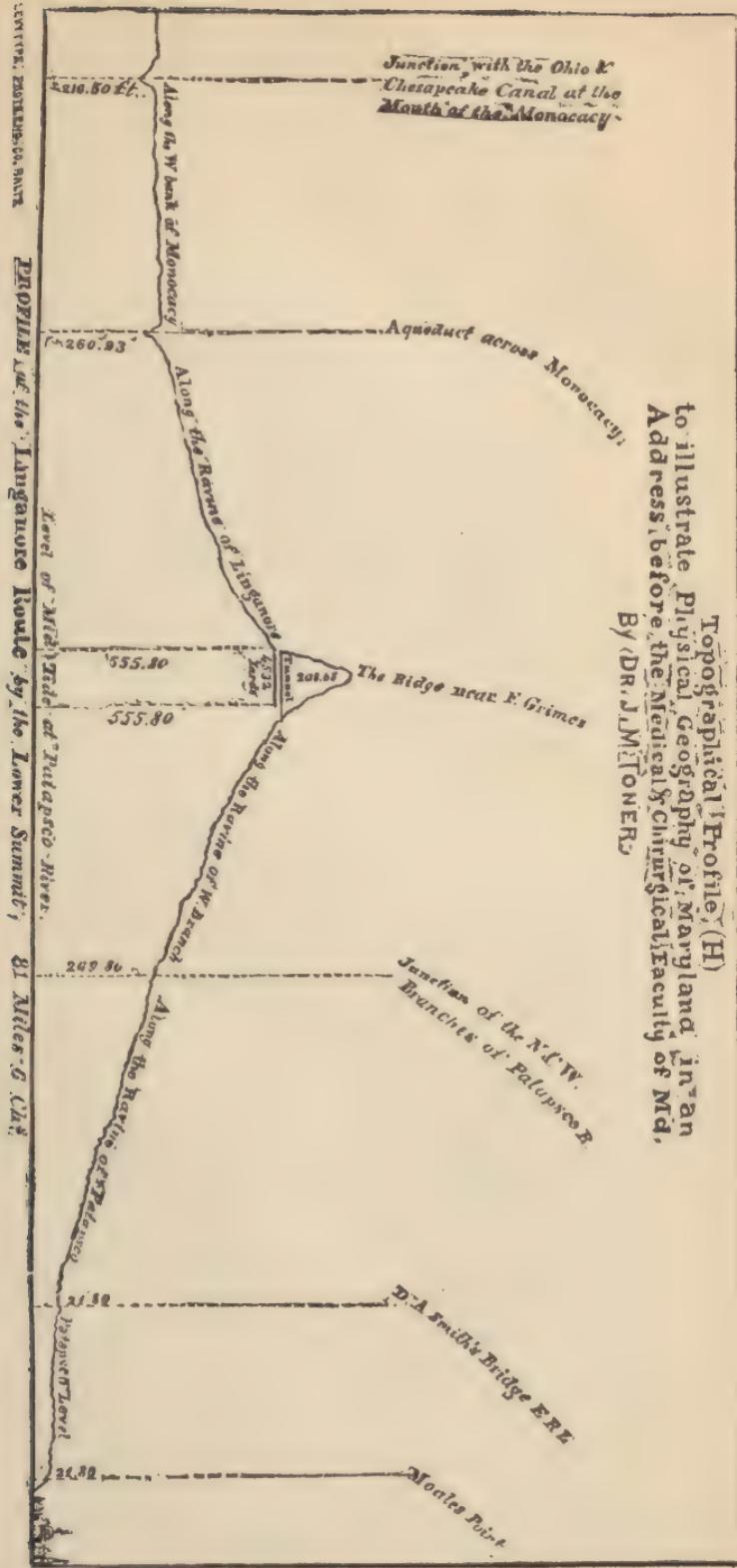
Published by J. M. Woolcott, Eng'r

PROFILE or Route of western Maryland Rail Road

Furnished by J.M. Hood, Pres't.



Topographical Profile (H)
to illustrate Physical Geography of Maryland in an
Address before the Medical & Chirurgical Faculty of Md.
By DR. J. M. TOWER,



Sideling Hill

Cowpensheage

Marsh Run

Antietam Cr.

Soulls Mt. or Blue Ridge,

Middletown

Catoctin Mt.

Monocacy R.

Parry Ridge. 524 A.M.T.

New Lisbon.

Deep Run.

Chesapeake Bay (partly)

LAWRENCE, PHILADELPHIA.
SECTION from near the N.W. corner of Maryland to the mouth of the Patapsco

From Prof. Lysons' Geological Map of Md.

To Topographical Profile (K)
To illustrate
Physical Geography of Maryland
In an Address before the
Medical and Chirurgical Faculty of Ma.
By DR. J. M. TONER.

Topographical Profile (L)

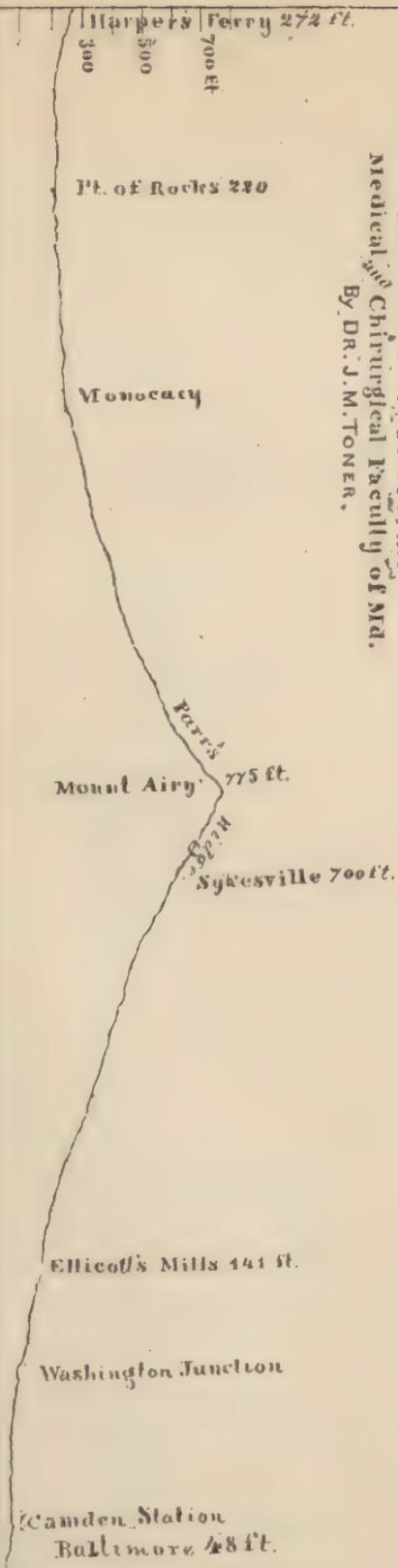
to illustrate

Physical Geography of Maryland

In an Address before the

Medical and Chirurgical Faculty of Md.

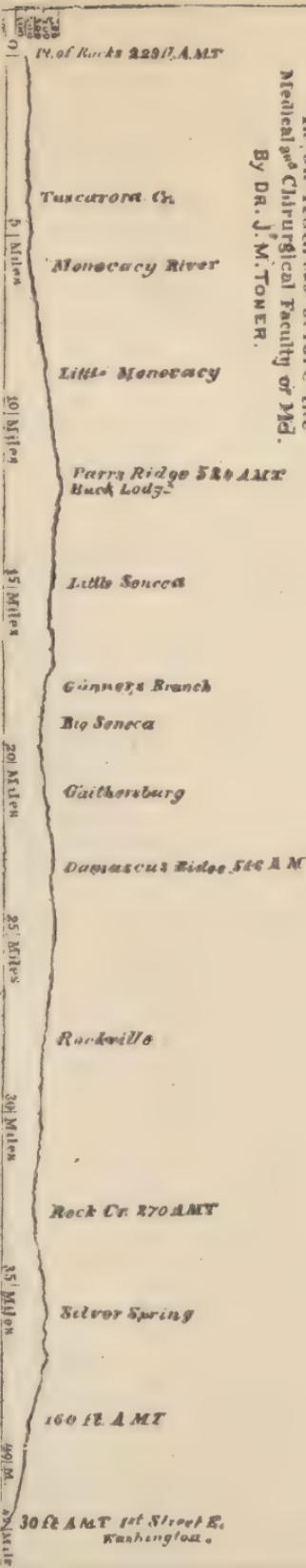
By DR. J. M. TONER.



TOPOGRAPHICAL PROFILE
to illustrate
Physical Geography of Maryland
In an Address before the
Medical and Chirurgical Faculty of Md.
By DR. J. M. TONER.

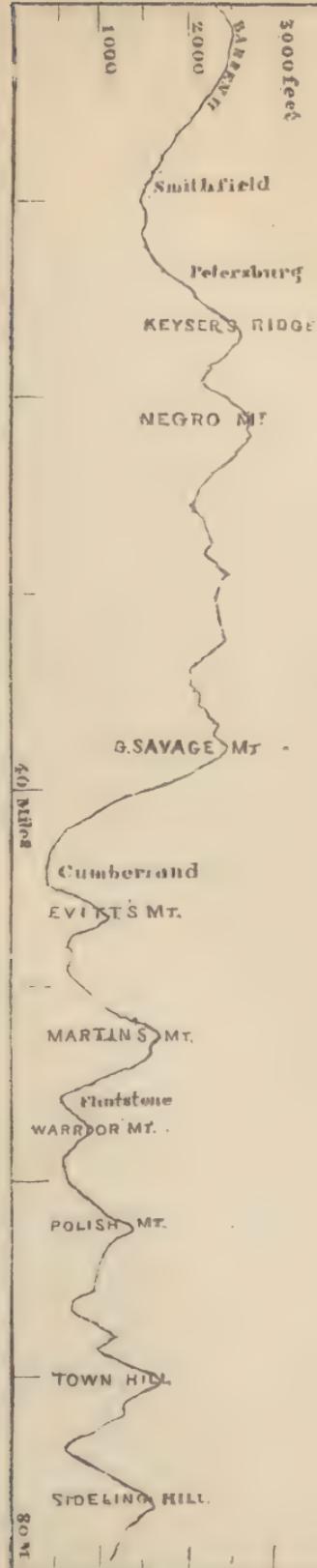
PROFILE of the Country traversed by the Balt. & Ohio R.R. between Balt. and Cumberland
From Map of the B&O R.R.

Topographical Profile (M)
To Illustrate
Physical Geography of Maryland
In An Address before the
Medical and Chirurgical Faculty of Md.
By DR. J. M. TOWER.



REV'D. PRINTED FOR THE PROFESSOR OF PHYSICAL GEOGRAPHY IN THE UNIVERSITY OF MARYLAND.
PROFILE of the Country traversed by the Metropolitan Branch R.R. from Pt. of Rocks to Washington,
from Map of B&O R.R.

Topographical Profile (N)
to illustrate
Physical Geography of Maryland
In an Address before the
Medical and Surgical Faculty of Md.
By DR. J. M. TONER.



PROFILE of the Cumberland and National Roads

From Report of Geologist of Md., 1840.

LEAVITT, PHOTO. ENGS. & CO. BALTIMORE.

Topographical Profile (O)

to illustrate

Physical Geography of Maryland

In an Address before the

Medical and Chirurgical Faculty of Med.
By DR. J. M. TONER

